SEQUENCE LISTING

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<120> METHODS AND MATERIALS RELATING TO NOVEL SECRETED ADIPONECTIN-LIKE POLYPEPTIDES AND POLYNUCLEOTIDES

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<140> Not Yet Assigned

<141> 2001-12-03

<150> US 09/488,725

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<150> US 09/552,317

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- <151> 2000-02-03
- <150> US 09/560,875
- <151> 2000-04-27
- <150> PCT/US01/03800
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- <150> PCT/US01/08631
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- <150> US09/728,952

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gaaagaaatg aaagtctgag tgttgaagac cagatggagc agtcatcctt gtacttttgg

360

| gac | cttt | tgg | aagg | tagt | ga g | aaag | cagt | g gt | agga | .acga | cat | acaa | aca | cttg | aaggat | 420 |
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| cta | ctgt | cta | aatt | gctg | aa c | tcag | gcta | t tt | tgaa | agta | tac | cagt | tcc | caaa | aatgcc | 480 |
| aag | gaaa | agg | aagt | acca | ct g | gagg | aaga | | | | | | _ | _ | a aaa s Lys | 534 |
| | | | tcg Ser | | | | | | | | | | | | | 582 |
| | | | cag Gln | | | | | | | | | | | | | 630 |
| | | | gaa Glu | | | | | | | | | | | | | 678 |
| | | | gat Asp 60 | | | | | | | | | | | | | 726 |
| | | | gaa Glu | | | | | | | | | | | | | 774 |
| | | | gct Ala | | | | | | | | | | | | | 822 |
| | | | cag Gln | | | | | | | | | | | | | 870 |
| | | | cag Gln | | | | | | | | | | | | | 918 |
| | | | aag Lys 140 | | _ | | | | | | - | | | _ | | 966 |
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|-----|-----|-----|-----|-----|-----|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|------------|------|
| | | | | | | aaa Lys | | | | | | | | | att Ile | 1206 |
| | | | | | | gta Val | | | | | | | | | | 1254 |
| | | | | | | ttg Leu 255 | | | | | | | | | | 1302 |
| | | | | | | ggt Gly | | | | | | | | | | 1350 |
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| - | | | | _ | | caa Gln | _ | | | _ | | | | _ | | 1494 |
| | | | | | | aat Asn 335 | | | | | | | | | | 1542 |
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| | | | | | | gag Glu | | | | | | | | | | 1686 |
| | | | _ | | | aat Asn | | | _ | _ | _ | | | _ | _ | 1734 |
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| gca | ccc | ttt | caa | gcc | atg | cag | aca | gta | ttt | aac | gtt | aat | gca | cct | ctg | 1830 |

| Ala 425 | Pro | Phe | Gln | Ala | Met 430 | Gln | Thr | Val | Phe | Asn 435 | Val | Asn | Ala | Pro | Leu 440 | |
|------------|-----|-----|-----|-----|-------------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|------|
| | | | | | caa Gln | | | | | | | | | | | 1878 |
| | | | _ | | acc Thr | | _ | _ | | | | | | _ | _ | 1926 |
| | | | | | cat His | | | | | | | | | | | 1974 |
| | | | | | gat Asp | | | | | | | | | | | 2022 |
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| | | | | | gga Gly | | | _ | _ | | | | | | | 2454 |
| | | | | | gca Ala | | | | | | | | | | | 2502 |

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Asn Lys Gln Gly Glu Glu Gln Pro Trp Glu Ala Asp Tyr Ala Arg Lys 50 55 60

Pro Asn Leu Pro Lys Arg Trp Asp Met Leu Thr Glu Pro Asp Gly Gln 65 70 75 80

Glu Lys Lys Gln Glu Ser Phe Lys Ser Trp Glu Ala Ser Gly Lys His
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Gln Glu Val Ser Lys Pro Ala Val Ser Leu Glu Gln Arg Lys Gln Asp 100 105 110

Thr Ser Lys Leu Arg Ser Thr Leu Pro Glu Glu Gln Lys Lys Gln Glu
115 120 125

Ile Ser Lys Ser Lys Pro Ser Pro Ser Gln Trp Lys Gln Asp Thr Pro 130 135 140

Pro Lys Leu Trp Pro Val Gln Leu Gln Lys Glu Gln Asp Pro Lys Lys 165 170 175

Gln Thr Pro Lys Ser Trp Thr Pro Ser Met Gln Ser Glu Gln Asn Thr 180 185 190

Thr Lys Ser Trp Thr Thr Pro Met Cys Glu Glu Gln Asp Ser Lys Gln 195 200 205

Pro Glu Thr Pro Lys Ser Trp Glu Asn Asn Val Glu Ser Gln Lys His 210 215 220

Ser Leu Thr Ser Gln Ser Gln Ile Ser Pro Lys Ser Trp Gly Val Ala 225 230 235 240

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Thr Glu Pro Lys Asp Val Pro Lys Pro Val His Gln Pro Val Gly Ser 260 265 270

Ser Ser Thr Leu Pro Lys Asp Pro Val Leu Arg Lys Glu Lys Leu Gln 275 280 285

Asp Leu Met Thr Gln Ile Gln Gly Thr Cys Asn Phe Met Gln Glu Ser 290 295 300

Val Leu Asp Phe Asp Lys Pro Ser Ser Ala Ile Pro Thr Ser Gln Pro 305 310 315 320

Pro Ser Ala Thr Pro Gly Ser Pro Val Ala Ser Lys Glu Gln Asn Leu 325 330 335

Ser Ser Gln Ser Asp Phe Leu Gln Glu Pro Leu Gln Ala Thr Ser Ser 340 345 350

Pro Val Thr Cys Ser Ser Asn Ala Cys Leu Val Thr Thr Asp Gln Ala 355 360 365

Ser Ser Gly Ser Glu Thr Glu Phe Met Thr Ser Glu Thr Pro Glu Ala 370 375 380

Ala Ile Pro Pro Gly Lys Gln Pro Ser Ser Leu Ala Ser Pro Asn Pro 385 390 395 400

Pro Met Ala Lys Gly Ser Glu Gln Gly Phe Gln Ser Pro Pro Ala Ser 405 410 415

Ser Ser Ser Val Thr Ile Asn Thr Ala Pro Phe Gln Ala Met Gln Thr 420 425 430

Val Phe Asn Val Asn Ala Pro Leu Pro Pro Arg Lys Glu Gln Glu Ile 435 440 445

Lys Glu Ser Pro Tyr Ser Pro Gly Tyr Asn Gln Ser Phe Thr Thr Ala 450 455 460

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Val Phe Pro Arg Pro Thr Gln Pro Phe Val Asn Ser Arg Gly Ser Val 515 520 525

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Pro Gly Gly Tyr Lys Gly Phe Asp Thr Tyr Arg Gly Leu Pro Ser Ile 545 550 560

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Gly Ala Pro Tyr Ser Gln Arg Cys Leu Glu Thr Ser Glu Pro Leu Trp 580 585 590

Leu Leu Gly Lys Ala Arg Ile Ile Ser Ser Ser Val Ile Ser Glu Glu 595 600 605

Gly His Leu Val Val His Glu Gln Ile Arg Glu Val Ser Ser Pro Glu 610 620

Arg Asp Asn Glu Thr Phe Asn Ser Gly Asp Ser Gly Gln Gly Asp Ser 625 630 635 640

Arg Ser Met Thr Pro Val Asp Val Pro Val Thr Asn Pro Ala Ala Thr 645 650 655

Ile Leu Pro Val His Val Tyr Pro Leu Pro Gln Gln Met Arg Val Ala 660 665 670

Phe Ser Ala Ala Arg Thr Ser Asn Leu Ala Pro Gly Thr Leu Asp Gln 675 680 685

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710

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| aca caa tta tcg aa Thr Gln Leu Ser Ly 10 | g act gaa tct s Thr Glu Ser 15 | Val Lys Glu | tca gag tct cta Ser Glu Ser Leu 20 | atg 582 Met |
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| atg ctt act gaa cc Met Leu Thr Glu Pr 75 | | | | |
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| cag aaa gaa caa ga Gln Lys Glu Gln As 170 | | Gln Thr Pro | | |
| tcc atg cag agc ga Ser Met Gln Ser Gl 185 | a cag aac acc u Gln Asn Thr 190 | acc aag tca Thr Lys Ser | tgg acc act ccc Trp Thr Thr Pro | atg 1110 Met 200 |

| | | | | | | aaa Lys | | | | | | | | | | 1158 |
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| | | | | | | gta Val | | | | | | | | | | 1254 |
| | | | | | | ttg Leu 255 | | | | | | | | | | 1302 |
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| | | | | | | ctg Leu | | | | | | | | | | 1398 |
| | | | | | | gag Glu | | | | | | | | | | 1446 |
| _ | _ | | | _ | | caa Gln | _ | | | | | | | | | 1494 |
| | | | | | | aat Asn 335 | _ | | | | | | | | | 1542 |
| | _ | | _ | - | | aac Asn | _ | | _ | | _ | | | _ | | 1590 |
| | | | | | | tcc Ser | | | | | | | | | | 1638 |
| | | | _ | _ | | caa Gln | | | | _ | - | | | | | 1686 |
| | | - | _ | | | gtc Val | | | | | | - | _ | | | 1734 |
| | | _ | | | | caa Gln 415 | _ | _ | | | _ | | _ | | | 1782 |
| cca | gca | cag | acg | aat | gtg | ttt | ccc | aga | cct | act | cag | cca | ttt | gtc | aat | 1830 |

| | | | | | | _ | | _ | _ | _, | ~7 | | Dl | 77-7 | 7 ~~ | |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------|
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| aat Asn | tcc Ser | tat Tyr | cgg Arg 460 | tcc Ser | cct Pro | ggt Gly | ggt Gly | tat Tyr 465 | aaa Lys | ggt Gly | ttt Phe | gat Asp | act Thr 470 | tat Tyr | aga Arg | 1926 |
| gga Gly | ctc Leu | cct Pro 475 | tca Ser | att Ile | tcc Ser | aat Asn | gga Gly 480 | aat Asn | tat Tyr | agc Ser | cag Gln | ctg Leu 485 | cag Gln | ttc Phe | caa Gln | 1974 |
| gct Ala | aga Arg 490 | gag Glu | tat Tyr | tct Ser | gga Gly | gca Ala 495 | cct Pro | tat Tyr | tcc Ser | caa Gln | agg Arg 500 | gat Asp | aat Asn | ttc Phe | cag Gln | 2022 |
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| aga Arg | gca Ala | gly ggg | tgg Trp | agt Ser 525 | gat Asp | tct Ser | tct Ser | cag Gln | gtg Val 530 | agc Ser | agc Ser | cca Pro | gaa Glu | aga Arg 535 | gac Asp | 2118 |
| aac Asn | gaa Glu | acc Thr | ttt Phe 540 | aac Asn | agt Ser | ggt Gly | gac Asp | tct Ser 545 | gga Gly | caa Gln | gga Gly | gac Asp | tcc Ser 550 | cgt Arg | agc Ser | 2166 |
| atg Met | acc Thr | cct Pro 555 | gtg Val | gat Asp | gtg Val | cca Pro | gtg Val 560 | aca Thr | aat Asn | cca Pro | gca Ala | gcc Ala 565 | acc Thr | ata Ile | ctg Leu | 2214 |
| cca Pro | gta Val 570 | cac His | gtc Val | tac Tyr | cct Pro | ctg Leu 575 | cct Pro | cag Gln | cag Gln | atg Met | cga Arg 580 | gtt Val | gcc Ala | ttc Phe | tca Ser | 2262 |
| gca Ala 585 | gcc Ala | aga Arg | acc Thr | tct Ser | aat Asn 590 | ctg Leu | gcc Ala | cct Pro | gga Gly | act Thr 595 | tta Leu | gac Asp | caa Gln | cct Pro | tat Tyr 600 | 2310 |
| ggt Gly | gtt Val | gat Asp | ctt Leu | ctt Leu 605 | ctg Leu | aac Asn | aac Asn | tta Leu | gga Gly 610 | gaa Glu | act Thr | ttt Phe | gat Asp | ctt Leu 615 | cag Gln | 2358 |
| ctt Leu | ggt Gly | aga Arg | ttt Phe 620 | aat Asn | tgc Cys | cca Pro | gtg Val | aat Asn 625 | ggc Gly | act Thr | tac Tyr | gtt Val | ttc Phe 630 | att Ile | ttt Phe | 2406 |
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| aag Lys | aat Asn | gaa Glu | gag Glu | gtc Val | ttg Leu | gta Val | tca Ser | gcc Ala | tat Tyr | gcc Ala | aat Asn | gat Asp | ggt Gly | gct Ala | cca Pro | 2502 |

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gac cat gaa act gct agc aat cat gca att ctt cag ctc ttc cag gga 2550
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685 690 695

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Asn Lys Gln Gly Glu Gln Pro Trp Glu Ala Asp Tyr Ala Arg Lys 50 55 60

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Gln Glu Val Ser Lys Pro Ala Val Ser Leu Glu Gln Arg Lys Gln Asp 100 105 110

Thr Ser Lys Leu Arg Ser Thr Leu Pro Glu Glu Gln Lys Lys Gln Glu 115 120 125

Ile Ser Lys Ser Lys Pro Ser Pro Ser Gln Trp Lys Gln Asp Thr Pro 135 140 130 Lys Ser Lys Ala Gly Tyr Val Gln Glu Glu Gln Lys Lys Gln Glu Thr 150 Pro Lys Leu Trp Pro Val Gln Leu Gln Lys Glu Gln Asp Pro Lys Lys 170 165 Gln Thr Pro Lys Ser Trp Thr Pro Ser Met Gln Ser Glu Gln Asn Thr 185 180 Thr Lys Ser Trp Thr Thr Pro Met Cys Glu Glu Gln Asp Ser Lys Gln 200 Pro Glu Thr Pro Lys Ser Trp Glu Asn Asn Val Glu Ser Gln Lys His 220 215 210 Ser Leu Thr Ser Gln Ser Gln Ile Ser Pro Lys Ser Trp Gly Val Ala 235 225 230 Thr Ala Ser Leu Ile Pro Asn Asp Gln Leu Leu Pro Arg Lys Leu Asn 250 255 245 Thr Glu Pro Lys Asp Val Pro Lys Pro Val His Gln Pro Val Gly Ser 270 265 260 Ser Ser Thr Leu Pro Lys Asp Pro Val Leu Arg Lys Glu Lys Leu Gln 280 275 Asp Leu Met Thr Gln Ile Gln Gly Thr Cys Asn Phe Met Gln Glu Ser 290 295 Val Leu Asp Phe Asp Lys Pro Ser Ser Ala Ile Pro Thr Ser Gln Pro 315 305 310 Pro Ser Ala Thr Pro Gly Ser Pro Val Ala Ser Lys Glu Gln Asn Leu 330 325 Ser Ser Gln Ser Asp Phe Leu Gln Glu Pro Leu Gln Val Phe Asn Val 350 340 345

Asn Ala Pro Leu Pro Pro Arg Lys Glu Gln Glu Ile Lys Glu Ser Pro 355 360 365

Tyr Ser Pro Gly Tyr Asn Gln Ser Phe Thr Thr Ala Ser Thr Gln Thr 370 375 380

Pro Pro Gln Cys Gln Leu Pro Ser Ile His Val Glu Gln Thr Val His 385 390 395 400

Ser Gln Glu Thr Ala Ala Asn Tyr His Pro Asp Gly Thr Ile Gln Val 405 410 415

Ser Asn Gly Ser Leu Ala Phe Tyr Pro Ala Gln Thr Asn Val Phe Pro $420 \hspace{1.5cm} 425 \hspace{1.5cm} 430$

Arg Pro Thr Gln Pro Phe Val Asn Ser Arg Gly Ser Val Arg Gly Cys 435 440 445

Thr Arg Gly Gly Arg Leu Ile Thr Asn Ser Tyr Arg Ser Pro Gly Gly 450 455 460

Tyr Lys Gly Phe Asp Thr Tyr Arg Gly Leu Pro Ser Ile Ser Asn Gly 465 470 475 480

Asn Tyr Ser Gln Leu Gln Phe Gln Ala Arg Glu Tyr Ser Gly Ala Pro 485 490 495

Tyr Ser Gln Arg Asp Asn Phe Gln Gln Cys Tyr Lys Arg Gly Gly Thr 500 505 510

Ser Gly Gly Pro Arg Ala Asn Ser Arg Ala Gly Trp Ser Asp Ser Ser 515 520 525

Gln Val Ser Ser Pro Glu Arg Asp Asn Glu Thr Phe Asn Ser Gly Asp 530 535 540

Ser Gly Gln Gly Asp Ser Arg Ser Met Thr Pro Val Asp Val Pro Val 545 550 560

Thr Asn Pro Ala Ala Thr İle Leu Pro Val His Val Tyr Pro Leu Pro
565 570 575

| Gln | Gln | Met | Arg 580 | Val | Ala | Phe | Ser | Ala 585 | Ala | Arg | Thr | Ser | Asn 590 | Leu | Ala | |
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| Pro | Gly | Thr 595 | Leu | Asp | Gln | Pro | Tyr 600 | Gly | Val | Asp | Leu | Leu 605 | Leu | Asn | Asn | |
| Leu | Gly 610 | Glu | Thr | Phe | Asp | Leu 615 | Gln | Leu | Gly | Arg | Phe 620 | Asn | Cys | Pro | Val | |
| Asn 625 | Gly | Thr | Tyr | Val | Phe 630 | Ile | Phe | His | Met | Leu 635 | Lys | Leu | Ala | Val | Asn 640 | |
| Val | Pro | Leu | Tyr | Val 645 | Asn | Leu | Met | Lys | Asn 650 | Glu | Glu | Val | Leu | Val 655 | Ser | |
| Ala | Tyr | Ala | Asn 660 | Asp | Gly | Ala | Pro | Asp 665 | His | Glu | Thr | Ala | Ser 670 | Asn | His | |
| Ala | Ile | Leu 675 | Gln | Leu | Phe | Gln | Gly 680 | Asp | Gln | Ile | Trp | Leu 685 | Arg | Leu | His | |
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240

300

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420

480

600

660

<213> Homo sapiens

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Gly Lys Ile Gly Glu Gly Ala Glu Gly Asn Cys Lys Cys Val Ile Ser 50 55 60

Glu Gly Ala Trp Ala Val Cys Pro Thr Gln Pro Cys Gly Lys Ala Lys 65 70 75 80

Pro Asp Lys His Leu Lys Asp Leu Leu Ser Lys Leu Leu Asn Ser Gly 85 90 95

Tyr Phe Glu Ser Ile Pro Val Pro Lys Asn Ala Lys Glu Lys Glu Val 100 105 110

Pro Leu Glu Glu Met Leu Ile Gln Ser Glu Lys Lys Thr Gln Leu 115 120 125

Ser Lys Thr Glu Ser Val Lys Glu Ser Glu Ser Leu Met Glu Phe Ala 130 135 140

Gln Pro Glu Ile Gln Pro Gln Glu Phe Leu Asn Arg Arg Tyr Met Thr

| Glu Val As | o Tyr Ser 165 | | Gln | Gly | Glu 170 | Glu | Gln | Pro | Trp | Glu 175 | Ala |
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| Asp Tyr Al | a Arg Lys 180 | Pro Asr | Leu | Pro 185 | Lys | Arg | Trp | Asp | Met 190 | Leu | Thr |
| Glu Pro As | | . Glu Lys | Lys 200 | Gln | Glu | Ser | Phe | Lys 205 | Ser | Trp | Glu |
| Ala Ser Gl 210 | y Lys His | Gln Glu 215 | | Ser | Lys | Pro | Ala 220 | Val | Ser | Leu | Glu |
| Gln Arg Ly 225 | s Gln Asp | Thr Ser | : Lys | Leu | Arg | Ser 235 | Thr | Leu | Pro | Glu | Glu 240 |
| Gln Lys Ly | s Gln Glu 245 | | Lys | Ser | Lys 250 | Pro | Ser | Pro | Ser | Gln 255 | Trp |
| Lys Gln As | p Thr Pro 260 | Lys Ser | Lys | Ala 265 | Gly | Tyr | Val | Gln | Glu 270 | Glu | His |
| Lys Lys Gl 27 | | Pro Lys | Leu 280 | Trp | Pro | Val | Gln | Leu 285 | Gln | Lys | Glu |
| Gln Asp Pr 290 | o Lys Lys | Gln Thr 295 | | Lys | Ser | Trp | Thr 300 | Pro | Ser | Met | Gln |
| Ser Glu Gl 305 | n Asn Thr | Thr Lys | s Ser | Trp | Thr | Thr 315 | Pro | Met | Cys | Glu | Glu 320 |
| Gln Asp Se | r Lys Glr 325 | | ı Thr | Pro | Lys 330 | Ser | Trp | Glu | Asn | Asn 335 | Val |
| Glu Ser Gl | n Lys His 340 | s Ser Let | ı Thr | Ser 345 | Gln | Ser | Gln | Ile | Ser 350 | Pro | Lys |
| Ser Trp Gl | | a Thr Ala | ser 360 | Leu | Ile | Pro | Asn | Asp 365 | Gln | Leu | Leu |
| Pro Arg Ly 370 | s Leu Ası | Thr Gli | | Lys | Asp | Val | Pro 380 | Ile | Ala | Cys | Ala |

Ser Ala Gly Phe Leu Pro Leu Gln Pro Pro Phe Arg Arg Ile His Val Leu Arg Lys Glu Lys Leu Gln Asp Leu Met Thr Gln Ile Gln Gly Thr Cys Asn Phe Met Gln Glu Ser Val Leu Asp Phe Asp Lys Pro Ser Ser Ala Ile Pro Thr Ser Gln Pro Pro Ser Ala Thr Pro Gly Pro Arg Arg His Leu Lys Glu Gln Asn Leu Ser Val Lys Val Ile Phe Phe Gln Gly Ala Val Thr Val Phe Asn Val Asn Ala Pro Leu Pro Pro Arg Lys Glu Gln Glu Ile Lys Glu Ser Pro Tyr Ser Pro Gly Tyr Asn Gln Ser Phe Thr Thr Ala Ser Thr Gln Thr Pro Pro Gln Cys Gln Leu Pro Ser Ile His Val Glu Gln Thr Val His Ser Gln Glu Thr Ala Asn Tyr His Pro Asp Gly Thr Ile Gln Val Ser Asn Gly Ser Leu Ala Phe Tyr Pro Ala Gln Thr Asn Val Phe Pro Arg Pro Thr Gln Pro Phe Val Asn Ser Arg Gly Ser Val Arg Gly Cys Thr Arg Gly Gly Arg Leu Ile Thr Asn Ser Tyr Arg Ser Pro Gly Gly Tyr Lys Gly Phe Asp Thr Tyr Arg Gly Leu

Pro Ser Ile Ser Asn Gly Asn Tyr Ser Gln Leu Gln Phe Gln Ala Arg

Glu Tyr Ser Gly Ala Pro Tyr Ser Gln Arg Asp Asn Phe Gln Gln Cys 610 615 620

Tyr Lys Arg Gly Gly Thr Ser Gly Gly Pro Arg Ala Asn Ser Arg Ala 625 630 635

Gly Trp Ser Asp Ser Ser Gln Val Ser Ser Pro Glu Arg Asp Asn Glu 645 650 655

Thr Phe Asn Ser Gly Asp Ser Gly Gln Gly Asp Ser Arg Ser Met Thr 660 665 670

Pro Val Asp Val Pro Val Thr Asn Pro Ala Ala Thr Ile Leu Pro Val 675 680 685

His Val Tyr Pro Leu Pro Gln Gln Met Arg Val Ala Phe Ser Ala Ala 690 695 700

Arg Thr Ser Asn Leu Ala Pro Gly Thr Leu Asp Gln Pro Ile Val Phe 705 710 715 720

Asp Leu Leu Leu Asn Asn Leu Gly Glu Thr Phe Asp Leu Gln Leu Gly 725 730 730

Arg Phe Asn Cys Pro Val Asn Gly Thr Tyr Val Phe Ile Phe His Met 740 745 750

Leu Lys Leu Ala Val Asn Val Pro Leu Tyr Val Asn Leu Met Lys Asn 755 760 765

Glu Glu Val Leu Val Ser Ala Tyr Ala Asn Asp Gly Ala Pro Asp His
770 780

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Pro Ser Gly His Gly Glu Pro Cys Arg His Arg Pro Pro Pro Phe Pro 35 40 45

Gln Pro Pro Ala Gly Thr Gln Lys Pro Leu Leu Gln Gly Pro Gly Gly 50 55 60

Gly Pro Ala Glu Asn Ala Pro Thr Ala Ala Leu Gly Ser Pro Ala Pro 65 70 75 80

Pro Arg Gly Cys Gln Ala Ala Pro Pro Pro Arg Ser Gly Ala Gly Arg 85 90 95

Pro Asp Leu Pro Thr Leu Ala Gly Pro Arg Pro Ala Pro Ala Pro Pro 100 105 110

Pro Ser Ala Ala Pro Pro Pro Pro Pro Ser Gly Ala Pro Ser Arg Pro 115 120 125

Ala Ala Gly Arg Gln Arg Leu Ser Gly Val Ser Ser Gly Pro Ser Leu 130 135 140

Gly Trp Trp Val Gly Arg Gly Arg Gly Leu Pro Ala Phe Ala Gln Ile 145 150 155 160

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| cacctttcc | accggtgggg | gccccagtga | agtttaacaa | actgctgtat | aacggcagac | 420 |
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360 aggeteatte aggetggtge etactatggg ateaageege tgecacetea aatteeteet 420 cagatgccac cacaaattcc acaataccag cccctgggtc agcaagtacc tcacatgcct 480 ttggccaaag atggccttgc catgggcaag gagatgcccc acttgcagta tggcaaagag tatccacacc taccccaata tatgaaggaa attcaaccgg cgccaagaat gggcaaggaa 540 gccgttccca agaaaggcaa agaaatacca ttagccagtt tacgagggga acaaggtccc 600 cgtggagagc ctggcccaag aggaccacct gggccccctg gtttaccagg tcatgggata 660 720 cctggaatta aaggaaaacc agggccacag ggatatccag gagttggaaa gccaggtatg 780 cctggaatgc cagggaagcc aggagccatg ggcatgcctg gggcaaaagg agaaattgga cagaaagggg aaattgggcc tatggggatc ccatgaccac aaggacctcc agggcctcat 840 900 ggacttcctg gcattgggaa gccaggtggg ccagggttac cagggcaacc aggaccaaag 960 ggtgatcgag gacccaaagg actaccagga cctcaaggcc ttcggggtcc taaaggagac aagggetteg ggatgeeagg tgegeeaggt gtaaagggge eteeagggat geaeggeeet 1020 cccggccctg ttggactgcc aggagtgggc aaaccaggag tgacaggctt ccctgggccc 1080 ccagggcccc ctggggaaag ccaggggctc caggagaacc tgggccacaa ggccctattg 1140 gggtaccggg ggttcaagga cctcctggga tacccggaat tggaaagcca ggccaggatg 1200 gggatcccag gccagccagg atttccaggt ggcaaagggg agcaaggact gccagggcta 1260 ccaggacccc caggccttcc agggattggg aaaccaggct tcccaggacc caaaggtgac 1320 cggggcatgg gaggtgttcc tggggctctt ggaccaagag gggagaaagg accaataggt 1380 1440 gccccaggaa tagggggtcc tccaggagag ccaggcctgc ctggaatccc aggtcctatg 1500 ggccctccag gtgctattgg ttttcctgga cccaaaggag aaggtgggat tgtagggcca 1560 caggggccac caggtcccaa gggtgagcca gggcttcaag gcttcccagg aaagccaggt ttccttggtg aagtagggcc tcctggcatg aggggtttcc caggtcccat aggccccaag 1620 ggggaacatg ggcaaaaagg tgtaccagga ctccctggtg ttccagggct tctcggacct 1680 aagggagaac caggaatccc aggggatcag ggtttacagg gccccccagg tatcccaggg 1740 1800 attgggggcc ctagtggccc cattggacca cctgggattc caggccccaa aggggagcct 1860 ggcctcccag ggccccctgg gttccctggt atagggaaac ccggagtggc aggacttcat 1920 ggcccccag ggaagcctgg tgcccttggt cctcaaggcc agcctggcct tccaggaccc 1980 ccaggccctc caggacctcc aggaccccca gctgtgatgc cccctacacc accaccccag

| ggagagtatc tgccagatat | ggggctggga | attgatggcg | tgaaaccccc | ccatgcctac | 2040 |
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| tactttgcat accacgttca | ctgcaagggg | ggcaacgtgt | gggttgctct | attcaagaac | 2280 |
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| agcaaggaca ttggtctttg atttgattca gcagtcctgt caagtataaa tgtg atg Met 1 | 237 |
| gct gtg ctg cct ggc cct ctg cag ctg ctg gga gtg ctg ctt acc att Ala Val Leu Pro Gly Pro Leu Gln Leu Leu Gly Val Leu Leu Thr Ile 5 10 15 | 285 |
| tcc ctg agt tcc atc agg ctc att cag gct ggt gcc tac tat ggg atc Ser Leu Ser Ser Ile Arg Leu Ile Gln Ala Gly Ala Tyr Tyr Gly Ile 20 25 30 | 333 |
| aag ccg ctg cca cct caa att cct cct cag atg cca cca caa att cca Lys Pro Leu Pro Pro Gln Ile Pro Pro Gln Met Pro Pro Gln Ile Pro 35 40 45 | 381 |
| caa tac cag ccc ctg ggt cag caa gta cct cac atg cct ttg gcc aaa Gln Tyr Gln Pro Leu Gly Gln Gln Val Pro His Met Pro Leu Ala Lys 50 55 60 65 | 429 |
| gat ggc ctc gcc atg ggc aag gag atg ccc cac ttg cag tat ggc aaa Asp Gly Leu Ala Met Gly Lys Glu Met Pro His Leu Gln Tyr Gly Lys 70 75 80 | 477 |
| gag tat cca cac cta ccc caa tat atg aag gaa att caa ccg gcg cca Glu Tyr Pro His Leu Pro Gln Tyr Met Lys Glu Ile Gln Pro Ala Pro 85 90 95 | 525 |
| aga atg ggc aag gaa gcc gtt ccc aag aaa ggc aaa gaa ata cca tta Arg Met Gly Lys Glu Ala Val Pro Lys Lys Gly Lys Glu Ile Pro Leu 100 105 110 | 573 |
| gcc agt tta cga ggg gaa caa ggt ccc cgt gga gag cct ggc cca aga Ala Ser Leu Arg Gly Glu Gln Gly Pro Arg Gly Glu Pro Gly Pro Arg 115 120 125 | 621 |

| | | | gly ggg | | | | | | | | | | | | | 669 |
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| aaa Lys | gga Gly | aaa Lys | cca Pro | 999 Gly 150 | cca Pro | cag Gln | gga Gly | tat Tyr | cca Pro 155 | gga Gly | gtt Val | gga Gly | aag Lys | cca Pro 160 | ggt Gly | 717 |
| | | | atg Met 165 | | | | | | | | | | | | | 765 |
| | | | att Ile | | | | | | | | | | | | | 813 |
| | | | gga Gly | | | | | | | | | | | | | 861 |
| | | | cca Pro | | | | | | | | | | | | | 909 |
| | | | gga Gly | | | | | | | | | | | | | 957 |
| | | | ttc Phe 245 | | | | | | | | | | | | | 1005 |
| | | | ggc Gly | | | | | | | | | | | | | 1053 |
| | | | aca Thr | | | | | | | | | | | | | 1101 |
| | | | gga Gly | | | | | | | | | | | | | 1149 |
| | | | cct Pro | | | | | | | | | | | | | 1197 |
| | | | ggc Gly 325 | | | | | | | | | | | | | 1245 |
| | | | cta Leu | | | | | | | | | | | | | 1293 |
| ggc | ttc | cca | gga | ccc | aaa | ggt | gac | cgg | ggc | atg | gga | ggt | gtt | cct | ggg | 1341 |

| Gly | Phe 355 | Pro | Gly | Pro | Lys | Gly 360 | Asp | Arg | Gly | Met | Gly 365 | Gly | Val | Pro | Gly | |
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| gct Ala 370 | ctt Leu | gga Gly | cca Pro | aga Arg | 999 Gly 375 | gag Glu | aaa Lys | gga Gly | cca Pro | ata Ile 380 | ggt Gly | gcc Ala | cca Pro | gga Gly | ata Ile 385 | 1389 |
| gly ggg | ggt Gly | cct Pro | cca Pro | gga Gly 390 | gag Glu | cca Pro | ggc Gly | ctg Leu | cct Pro 395 | gga Gly | atc Ile | cca Pro | ggt Gly | cct Pro 400 | atg Met | 1437 |
| ggc Gly | cct Pro | cca Pro | ggt Gly 405 | gct Ala | att Ile | ggt Gly | ttt Phe | cct Pro 410 | gga Gly | ccc Pro | aaa Lys | gga Gly | gaa Glu 415 | ggt Gly | Gly 999 | 1485 |
| att Ile | gta Val | ggg Gly 420 | cca Pro | cag Gln | ggg Gly | cca Pro | cca Pro 425 | ggt Gly | ccc Pro | aag Lys | ggt Gly | gag Glu 430 | cca Pro | Gly ggg | ctt Leu | 1533 |
| caa Gln | ggc Gly 435 | ttc Phe | cca Pro | gga Gly | aag Lys | cca Pro 440 | ggt Gly | ttc Phe | ctt Leu | ggt Gly | gaa Glu 445 | gta Val | Gly ggg | cct Pro | cct Pro | 1581 |
| ggc Gly 450 | atg Met | agg Arg | ggt Gly | ttc Phe | cca Pro 455 | ggt Gly | ccc Pro | ata Ile | ggc Gly | ccc Pro 460 | aag Lys | gly aaa | gaa Glu | cat His | 999 Gly 465 | 1629 |
| | | | | | | | | | | | Gly aaa | | | | | 1677 |
| | | | | | | | | | | | tta Leu | | | | | 1725 |
| | | | | | | | | | | | att Ile | | | | | 1773 |
| att Ile | cca Pro 515 | ggc Gly | ccc Pro | aaa Lys | Gly 333 | gag Glu 520 | cct Pro | ggc Gly | ctc Leu | cca Pro | ggg Gly 525 | ccc Pro | cct Pro | ggg Gly | ttc Phe | 1821 |
| | | | | | | | | | | | cat His | | | | | 1869 |
| aag Lys | cct Pro | ggt Gly | gcc Ala | ctt Leu 550 | ggt Gly | cct Pro | caa Gln | ggc Gly | cag Gln 555 | cct Pro | ggc Gly | ctt Leu | cca Pro | gga Gly 560 | ccc Pro | 1917 |
| | | | | | | | | | | | gtg Val | | | | | 1965 |
| cca Pro | cca Pro | ccc Pro | cag Gln | gga Gly | gag Glu | tat Tyr | ctg Leu | cca Pro | gat Asp | atg Met | ggg Gly | ctg Leu | gga Gly | att Ile | gat Asp | 2013 |

580 585 590

| ggc Gly | gtg Val 595 | aaa Lys | ccc Pro | ccc Pro | cat His | gcc Ala 600 | tac Tyr | gly ggg | gct Ala | aag Lys | aaa Lys 605 | ggc Gly | aag Lys | aat Asn | gga Gly | 2061 |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------|
| 999 Gly 610 | cca Pro | gcc Ala | tat Tyr | gag Glu | atg Met 615 | cct Pro | gca Ala | ttt Phe | acc Thr | gcc Ala 620 | gag Glu | cta Leu | acc Thr | gca Ala | cct Pro 625 | 2109 |
| ttc Phe | cca Pro | ccg Pro | gtg Val | 630 639 | gcc Ala | cca Pro | gtg Val | aag Lys | ttt Phe 635 | aac Asn | aaa Lys | ctg Leu | ctg Leu | tat Tyr 640 | aac Asn | 2157 |
| ggc Gly | aga Arg | cag Gln | aac Asn 645 | tac Tyr | aac Asn | ccg Pro | cag Gln | aca Thr 650 | ggc Gly | atc Ile | ttc Phe | acc Thr | tgt Cys 655 | gag Glu | gtc Val | 2205 |
| cct Pro | ggt Gly | gtc Val 660 | tac Tyr | tac Tyr | ttt Phe | gca Ala | tac Tyr 665 | cac His | gtt Val | cac His | tgc Cys | aag Lys 670 | Gly aaa | ggc Gly | aac Asn | 2253 |
| gtg Val | tgg Trp 675 | gtt Val | gct Ala | cta Leu | ttc Phe | aag Lys 680 | aac Asn | aac Asn | gag Glu | ccc Pro | gtg Val 685 | atg Met | tac Tyr | acg Thr | tac Tyr | 2301 |
| gac Asp 690 | gag Glu | tac Tyr | aaa Lys | aag Lys | ggc Gly 695 | ttc Phe | ctg Leu | gac Asp | cag Gln | gca Ala 700 | tct Ser | gly ggg | agt Ser | gca Ala | gtg Val 705 | 2349 |
| ctg Leu | ctg Leu | ctc Leu | agg Arg | ccc Pro 710 | gga Gly | gac Asp | cgg Arg | gtg Val | ttc Phe 715 | ctc Leu | cag Gln | atg Met | ccc Pro | tca Ser 720 | gaa Glu | 2397 |
| cag Gln | gct Ala | gca Ala | gga Gly 725 | ctg Leu | tat Tyr | gcc Ala | gly ggg | cag Gln 730 | tat Tyr | gtc Val | cac His | tcc Ser | tcc Ser 735 | ttt Phe | tca Ser | 2445 |
| | | | | | ccc Pro | | taa | aaa | caaaa | aaa a | aaaa | aaaa | | | | 2487 |
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Ile Lys Pro Leu Pro Pro Gln Ile Pro Pro Gln Met Pro Pro Gln Ile 35 40 45

Pro Gln Tyr Gln Pro Leu Gly Gln Gln Val Pro His Met Pro Leu Ala 50 55 60

Lys Asp Gly Leu Ala Met Gly Lys Glu Met Pro His Leu Gln Tyr Gly 65 70 75 80

Lys Glu Tyr Pro His Leu Pro Gln Tyr Met Lys Glu Ile Gln Pro Ala 85 90 95

Pro Arg Met Gly Lys Glu Ala Val Pro Lys Lys Gly Lys Glu Ile Pro 100 105 110

Leu Ala Ser Leu Arg Gly Glu Gln Gly Pro Arg Gly Glu Pro Gly Pro 115 120 125

Arg Gly Pro Pro Gly Pro Pro Gly Leu Pro Gly His Gly Ile Pro Gly 130 135 140

Ile Lys Gly Lys Pro Gly Pro Gln Gly Tyr Pro Gly Val Gly Lys Pro 145 150 155 160

Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala Met Gly Met Pro Gly 165 170 175

Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile Gly Pro Met Gly Ile 180 185 190

Pro Gly Pro Gln Gly Pro Pro Gly Pro His Gly Leu Pro Gly Ile Gly 195 200 205

Lys Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp 210 215 220

Arg Gly Pro Lys Gly Leu Pro Gly Pro Gln Gly Leu Arg Gly Pro Lys 225 230 235 240

Gly Asp Lys Gly Phe Gly Met Pro Gly Ala Pro Gly Val Lys Gly Pro 245 250 255

Pro Gly Met His Gly Pro Pro Gly Pro Val Gly Leu Pro Gly Val Gly 260 265 270

Lys Pro Gly Val Thr Gly Phe Pro Gly Pro Gln Gly Pro Leu Gly Lys 275 280 285

Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly Pro Ile Gly Val Pro 290 295 300

Gly Val Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly Lys Pro Gly Gln 305 310 315

Asp Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln 325 330 335

Gly Leu Pro Gly Leu Pro Gly Pro Pro Gly Leu Pro Gly Ile Gly Lys 340 345 350

Pro Gly Phe Pro Gly Pro Lys Gly Asp Arg Gly Met Gly Gly Val Pro 355 360 365

Gly Ala Leu Gly Pro Arg Gly Glu Lys Gly Pro Ile Gly Ala Pro Gly 370 375 380

Ile Gly Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro 385 390 395 400

Met Gly Pro Pro Gly Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly 405 410 415

Gly Ile Val Gly Pro Gln Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly 420 425 430

Leu Gln Gly Phe Pro Gly Lys Pro Gly Phe Leu Gly Glu Val Gly Pro
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Pro Gly Met Arg Gly Phe Pro Gly Pro Ile Gly Pro Lys Gly Glu His 450 455 460

Gly Gln Lys Gly Val Pro Gly Leu Pro Gly Val Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly Ile Pro Gly Asp Gln Gly Leu Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu Pro Gly Pro Pro Gly Phe Pro Gly Ile Gly Lys Pro Gly Val Ala Gly Leu His Gly Pro Pro Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Pro Ala Val Met Pro Pro Thr Pro Pro Pro Gln Gly Glu Tyr Leu Pro Asp Met Gly Leu Gly Ile Asp Gly Val Lys Pro Pro His Ala Tyr Gly Ala Lys Lys Gly Lys Asn Gly Gly Pro Ala Tyr Glu Met Pro Ala Phe Thr Ala Glu Leu Thr Ala Pro Phe Pro Pro Val Gly Ala Pro Val Lys Phe Asn Lys Leu Leu Tyr Asn Gly Arg Gln Asn Tyr Asn Pro Gln Thr Gly Ile Phe Thr Cys Glu Val Pro Gly Val Tyr Tyr Phe Ala Tyr His Val His Cys Lys Gly Gly Asn Val Trp Val Ala Leu Phe Lys Asn Asn Glu Pro Val Met Tyr Thr

Tyr Asp Glu Tyr Lys Lys Gly Phe Leu Asp Gln Ala Ser Gly Ser Ala

690 695 700

Val Leu Leu Leu Arg Pro Gly Asp Arg Val Phe Leu Gln Met Pro Ser 705 710 715 720

Glu Gln Ala Ala Gly Leu Tyr Ala Gly Gln Tyr Val His Ser Ser Phe 725 730 735

Ser Gly Tyr Leu Leu Tyr Pro Met 740

<210> 29

<211> 2235

<212> DNA

<213> Homo sapiens

<400> 29 atggctgtgc tgcctggccc tctgcagctg ctgggagtgc tgcttaccat ttccctgagt 60 120 tccatcaggc tcattcaggc tggtgcctac tatgggatca agccgctgcc acctcaaatt cctcctcaga tgccaccaca aattccacaa taccagcccc tgggtcagca agtacctcac 180 atgeetttgg ccaaagatgg cetegeeatg ggeaaggaga tgeeceaett geagtatgge 240 300 aaagagtatc cacacctacc ccaatatatg aaggaaattc aaccggcgcc aagaatgggc aaggaagccg ttcccaagaa aggcaaagaa ataccattag ccagtttacg aggggaacaa 360 420 ggtccccgtg gagagcctgg cccaagagga ccacctgggc cccctggttt accaggtcat gggatacctg gaattaaagg aaaaccaggg ccacagggat atccaggagt tggaaagcca 480 540 ggtatgcctg gaatgccagg gaagccagga gccatgggca tgcctggggc aaaaggagaa attggacaga aaggggaaat tgggcctatg gggatcccag gaccacaagg acctccaggg 600 660 cctcatggac ttcctggcat tgggaagcca ggtgggccag ggttaccagg gcaaccagga ccaaagggtg atcgaggacc caaaggacta ccaggacctc aaggccttcg gggtcctaaa 720 780 ggagacaagg gcttcgggat gccaggtgcg ccaggtgtaa aggggcctcc agggatgcac ggccctcccg gccctgttgg actgccagga gtgggcaaac caggagtgac aggcttccct 840 gggccccagg gccccctggg aaagccaggg gctccaggag aacctgggcc acaaggccct 900 960

1020 gatgggatcc caggccagcc aggatttcca ggtggcaaag gggagcaagg actgccaggg ctaccaggac ccccaggcct tccagggatt gggaaaccag gcttcccagg acccaaaggt 1080 gaccggggca tgggaggtgt tcctggggct cttggaccaa gaggggagaa aggaccaata 1140 1200 ggtgccccag gaataggggg tcctccagga gagccaggcc tgcctggaat cccaggtcct atgggccctc caggtgctat tggttttcct ggacccaaag gagaaggtgg gattgtaggg 1260 1320 ccacagggc caccaggtcc caagggtgag ccagggcttc aaggcttccc aggaaagcca ggtttccttg gtgaagtagg gcctcctggc atgaggggtt tcccaggtcc cataggcccc 1380 aagggggaac atgggcaaaa aggtgtacca ggactccctg gtgttccagg gcttctcgga 1440 1500 cctaagggag aaccaggaat cccaggggat cagggtttac agggcccccc aggtatccca gggattgggg gccctagtgg ccccattgga ccacctggga ttccaggccc caaaggggag 1560 1620 cctqqcctcc cagqqccccc tgggttccct ggtataggga aacccggagt ggcaggactt 1680 catggccccc cagggaagcc tggtgccctt ggtcctcaag gccagcctgg ccttccagga 1740 ccccaggcc ctccaggacc tccaggaccc ccagctgtga tgccccctac accaccaccc 1800 cagggagagt atctgccaga tatggggctg ggaattgatg gcgtgaaacc cccccatgcc tacggggcta agaaaggcaa gaatggaggg ccagcctatg agatgcctgc atttaccgcc 1860 1920 gagctaaccg cacctttccc accggtgggg gccccagtga agtttaacaa actgctgtat aacggcagac agaactacaa cccgcagaca ggcatcttca cctgtgaggt ccctggtgtc 1980 2040 tactactttg cataccacgt tcactgcaag gggggcaacg tgtgggttgc tctattcaag aacaacgagc ccgtgatgta cacgtacgac gagtacaaaa agggcttcct ggaccaggca 2100 2160 tctgggagtg cagtgctgct gctcaggccc ggagaccggg tgttcctcca gatgccctca gaacaggctg caggactgta tgccgggcag tatgtccact cctccttttc aggatattta 2220 2235 ttgtatccca tgtaa

<210> 30

<211> 27

<212> PRT

<213> Homo sapiens

<400> 30

Met Ala Val Leu Pro Gly Pro Leu Gln Leu Leu Gly Val Leu Leu Thr
1 5 10 15

Ile Ser Leu Ser Ser Ile Arg Leu Ile Gln Ala 20 25

<210> 31

<211> 717

<212> PRT

<213> Homo sapiens

<400> 31

Gly Ala Tyr Tyr Gly Ile Lys Pro Leu Pro Pro Gln Ile Pro Pro Gln 1 5 10 15

Met Pro Pro Gln Ile Pro Gln Tyr Gln Pro Leu Gly Gln Gln Val Pro
20 25 30

His Met Pro Leu Ala Lys Asp Gly Leu Ala Met Gly Lys Glu Met Pro 35 40 45

His Leu Gln Tyr Gly Lys Glu Tyr Pro His Leu Pro Gln Tyr Met Lys 50 55 60

Glu Ile Gln Pro Ala Pro Arg Met Gly Lys Glu Ala Val Pro Lys Lys 65 70 75 80

Gly Lys Glu Ile Pro Leu Ala Ser Leu Arg Gly Glu Gln Gly Pro Arg 85 90 95

Gly Glu Pro Gly Pro Arg Gly Pro Pro Gly Pro Pro Gly Leu Pro Gly 100 105 110

His Gly Ile Pro Gly Ile Lys Gly Lys Pro Gly Pro Gln Gly Tyr Pro 115 120 125

Gly Val Gly Lys Pro Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala 130 135 140

Met Gly Met Pro Gly Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile 150 Gly Pro Met Gly Ile Pro Gly Pro Gln Gly Pro Pro Gly Pro His Gly 170 165 Leu Pro Gly Ile Gly Lys Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly Pro Lys Gly Leu Pro Gly Pro Gln Gly Leu Arg Gly Pro Lys Gly Asp Lys Gly Phe Gly Met Pro Gly Ala Pro 215 210 Gly Val Lys Gly Pro Pro Gly Met His Gly Pro Pro Gly Pro Val Gly 235 230 Leu Pro Gly Val Gly Lys Pro Gly Val Thr Gly Phe Pro Gly Pro Gln 250 245 Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly 260 Pro Ile Gly Val Pro Gly Val Gln Gly Pro Pro Gly Ile Pro Gly Ile 275 Gly Lys Pro Gly Gln Asp Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly 295 Gly Lys Gly Glu Gln Gly Leu Pro Gly Leu Pro Gly Pro Pro Gly Leu 310 305 Pro Gly Ile Gly Lys Pro Gly Phe Pro Gly Pro Lys Gly Asp Arg Gly 330 325 Met Gly Gly Val Pro Gly Ala Leu Gly Pro Arg Gly Glu Lys Gly Pro 345 340 Ile Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly Leu Pro 360 355

Gly Ile Pro Gly Pro Met Gly Pro Pro Gly Ala Ile Gly Phe Pro Gly

370 375 380

| Pro 385 | Lys | Gly | Glu | Gly | Gly 390 | Ile | Val | Gly | Pro | Gln 395 | Gly | Pro | Pro | Gly | Pro 400 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Lys | Gly | Glu | Pro | Gly 405 | Leu | Gln | Gly | Phe | Pro 410 | Gly | Lys | Pro | Gly | Phe 415 | Leu |
| Gly | Glu | Val | Gly 420 | Pro | Pro | Gly | Met | Arg 425 | Gly | Phe | Pro | Gly | Pro 430 | Ile | Gly |
| Pro | Lys | Gly 435 | Glu | His | Gly | Gln | Lys 440 | Gly | Val | Pro | Gly | Leu 445 | Pro | Gly | Val |
| Pro | Gly 450 | Leu | Leu | Gly | Pro | Lys 455 | Gly | Glu | Pro | Gly | Ile 460 | Pro | Gly | Asp | Gln |
| Gly 465 | Leu | Gln | Gly | Pro | Pro 470 | Gly | Ile | Pro | Gly | Ile 475 | Gly | Gly | Pro | Ser | Gly 480 |
| Pro | Ile | Gly | Pro | Pro 485 | Gly | Ile | Pro | Gly | Pro 490 | Lys | Gly | Glu | Pro | Gly 495 | Leu |
| Pro | Gly | Pro | Pro 500 | Gly | Phe | Pro | Gly | Ile 505 | Gly | Lys | Pro | Gly | Val 510 | Ala | Gly |
| Leu | His | Gly 515 | Pro | Pro | Gly | Lys | Pro 520 | Gly | Ala | Leu | Gly | Pro 525 | Gln | Gly | Gln |
| Pro | Gly 530 | Leu | Pro | Gly | Pro | Pro 535 | Gly | Pro | Pro | Gly | Pro 540 | Pro | Gly | Pro | Pro |
| Ala 545 | Val | Met | Pro | Pro | Thr 550 | Pro | Pro | Pro | Gln | Gly 555 | Glu | Tyr | Leu | Pro | Asp 560 |
| Met | Gly | Leu | Gly | Ile 565 | Asp | Gly | Val | Lys | Pro 570 | Pro | His | Ala | Tyr | Gly 575 | Ala |
| Lys | Lys | Gly | Lys 580 | Asn | Gly | Gly | Pro | Ala 585 | Tyr | Glu | Met | Pro | Ala 590 | Phe | Thr |
| Ala | Glu | Leu 595 | Thr | Ala | Pro | Phe | Pro 600 | Pro | Val | Gly | Ala | Pro 605 | Val | Lys | Phe |

Asn Lys Leu Leu Tyr Asn Gly Arg Gln Asn Tyr Asn Pro Gln Thr Gly 610 615 620

Ile Phe Thr Cys Glu Val Pro Gly Val Tyr Tyr Phe Ala Tyr His Val 625 630 635 640

His Cys Lys Gly Gly Asn Val Trp Val Ala Leu Phe Lys Asn Asn Glu 645 650 655

Pro Val Met Tyr Thr Tyr Asp Glu Tyr Lys Lys Gly Phe Leu Asp Gln 660 665 670

Ala Ser Gly Ser Ala Val Leu Leu Leu Arg Pro Gly Asp Arg Val Phe 675 680 685

Leu Gln Met Pro Ser Glu Gln Ala Ala Gly Leu Tyr Ala Gly Gln Tyr 690 695 700

Val His Ser Ser Phe Ser Gly Tyr Leu Leu Tyr Pro Met 705 710 715

<210> 32

<211> 36

<212> PRT

<213> Homo sapiens

<400> 32

Pro Val Lys Phe Asn Lys Leu Leu Tyr Asn Gly Arg Gln Asn Tyr Asn 1 5 10 15

Pro Gln Thr Gly Ile Phe Thr Cys Glu Val Pro Gly Val Tyr Tyr Phe 20 25 30

Ala Tyr His Val

<210> 33

<211> 20

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<212> PRT
<213> Homo sapiens
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Phe Thr Cys Glu Val Pro Gly Val Tyr Tyr Phe Ala Tyr His Val His
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Cys Lys Gly Gly
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<210> 34
<211> 27
<212> PRT
<213> Homo sapiens
<400> 34
Phe Pro Pro Val Gly Ala Pro Val Lys Phe Asn Lys Leu Leu Tyr Asn
Gly Arg Gln Asn Tyr Asn Pro Gln Thr Gly Ile
<210> 35
<211> 22
<212> PRT
<213> Homo sapiens
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Asp Gln Ala Ser Gly Ser Ala Val Leu Leu Leu Arg Pro Gly Asp Arg
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Val Phe Leu Gln Met Pro
           20
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<210> 36
<211> 20
<212> PRT
<213> Homo sapiens
<400> 36
Asp Gln Ala Ser Gly Ser Ala Val Leu Leu Leu Arg Pro Gly Asp Arg
Val Phe Leu Gln
           20
<210> 37
<211> 27
<212> PRT
<213> Homo sapiens
<400> 37
Pro Gly Pro His Gly Leu Pro Gly Ile Gly Lys Pro Gly Gly Pro Gly
               5
                                   10
Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg
<210> 38
<211> 29
<212> PRT
<213> Homo sapiens
<400> 38
Gly Pro Pro Gly Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly Gly
                                                       15
                5
                                    10
Ile Val Gly Pro Gln Gly Pro Pro Gly Pro Lys Gly Glu
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20 25

<210> 39

<211> 27

<212> PRT

<213> Homo sapiens

<400> 39

Gly Pro Pro Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly Pro Ile Gly
1 5 10 15

Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu Pro 20 25

<210> 40

<211> 27

<212> PRT

<213> Homo sapiens

<400> 40

Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro Met Gly 1 5 10 15

Pro Pro Gly Ala Ile Gly Phe Pro Gly Pro Lys 20 25

<210> 41

<211> 27

<212> PRT

<213> Homo sapiens

<400> 41

Gly Val Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly Ile Pro Gly 1 5 10 15

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Asp Gln Gly Leu Gln Gly Pro Pro Gly Ile Pro
            20
<210> 42
<211> 27
<212> PRT
<213> Homo sapiens
<400> 42
Gly Lys Pro Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala Met Gly
                                    10
Met Pro Gly Ala Lys Gly Glu Ile Gly Gln Lys
<210> 43
<211> 11
<212> PRT
<213> Homo sapiens
<400> 43
Val His Ser Ser Phe Ser Gly Tyr Leu Leu Tyr
<210> 44
<211> 27
<212> PRT
<213> Homo sapiens
<400> 44
Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly
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<400> 47

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Pro Lys Gly Leu Pro Gly Pro Gln Gly Leu Arg
<210> 45
<211> 29
<212> PRT
<213> Homo sapiens
<400> 45
Gly Lys Pro Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala Met Gly
                                    10
Met Pro Gly Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu
<210> 46
<211> 27
<212> PRT
<213> Homo sapiens
<400> 46
Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly
Leu Pro Gly Leu Pro Gly Pro Pro Gly Leu Pro
            20
                               25
<210> 47
<211> 27
<212> PRT
<213> Homo sapiens
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Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly
                                     10
 Ile Pro Gly Pro Met Gly Pro Pro Gly Ala Ile
             20
                                 25
 <210> 48
 <211> 27
 <212> PRT
<213> Homo sapiens
<400> 48
Gly Lys Pro Gly Gln Asp Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly
                                    10
Gly Lys Gly Glu Gln Gly Leu Pro Gly Leu Pro
<210> 49
<211> 29
<212> PRT
<213> Homo sapiens
<400> 49
Gly Phe Pro Gly Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro Gly
Met Arg Gly Phe Pro Gly Pro Ile Gly Pro Lys Gly Glu
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<210> 50
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<210> 50
<211> 27
<212> PRT

<213> Homo sapiens

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<400> 50
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Gly Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu Pro Gly 1 5 10 15

Pro Pro Gly Phe Pro Gly Ile Gly Lys Pro Gly 20 25

<210> 51

<211> 27

<212> PRT

<213> Homo sapiens

<400> 51

Gly Met Pro Gly Ala Pro Gly Val Lys Gly Pro Pro Gly Met His Gly
1 10 15

Pro Pro Gly Pro Val Gly Leu Pro Gly Val Gly 20 25

<210> 52

<211> 27

<212> PRT

<213> Homo sapiens

<400> 52

Gly Phe Pro Gly Pro Gln Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly 1 5 10 15

Glu Pro Gly Pro Gln Gly Pro Ile Gly Val Pro
20 25

<210> 53

<211> 27

<212> PRT

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<213> Homo sapiens
<400> 53
Gly Pro Pro Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly
                5
Leu Pro Gly Pro Pro Gly Pro Pro Pro
            20
<210> 54
<211> 27
<212> PRT
<213> Homo sapiens
<400> 54
Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly Ile Pro Gly Pro Lys Gly
Glu Pro Gly Leu Pro Gly Pro Pro Gly Phe Pro
            20
<210> 55
<211> 27
<212> PRT
<213> Homo sapiens
<400> 55
Gly Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro Gly Ala Ile Gly
                                   10
Phe Pro Gly Pro Lys Gly Glu Gly Gly Ile Val
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<210> 56

<211> 27

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<212> PRT
 <213> Homo sapiens
<400> 56
Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly
Pro Pro Gly Pro Pro Gly Pro Pro Pro
            20
<210> 57
<211>
      29
<212> PRT
<213> Homo sapiens
<400> 57
Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro Met Gly
                                   10
                                                       15
Pro Pro Gly Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu
                               25
<210> 58
<211> 29
<212> PRT
<213> Homo sapiens
<400> 58
Gly Pro Ile Gly Pro Lys Gly Glu His Gly Gln Lys Gly Val Pro Gly
Leu Pro Gly Val Pro Gly Leu Leu Gly Pro Lys Gly Glu
           20
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25

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<210> 59
<211> 27
<212> PRT
<213> Homo sapiens
<400> 59
Pro Gly Ile Gly Lys Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly
Pro Lys Gly Asp Arg Gly Pro Lys Gly Leu Pro
<210> 60
<211> 27
<212> PRT
<213> Homo sapiens
<400> 60
Gly Ile Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly Ile Pro Gly
               5
                                                       15
Pro Lys Gly Glu Pro Gly Leu Pro Gly Pro Pro
<210> 61
<211> 27
<212> PRT
<213> Homo sapiens
<400> 61
Gly Pro Pro Gly Met Arg Gly Phe Pro Gly Pro Ile Gly Pro Lys Gly
                                   10
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Glu His Gly Gln Lys Gly Val Pro Gly Leu Pro

20 25

<210> 62

<211> 10

<212> PRT

<213> Homo sapiens

<400> 62

Ser Ser Phe Ser Gly Tyr Leu Leu Tyr Pro 1 5 10

<210> 63

<211> 27

<212> PRT

<213> Homo sapiens

<400> 63

Gly Lys Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly
1 5 10 15

Asp Arg Gly Pro Lys Gly Leu Pro Gly Pro Gln 20 25

<210> 64

<211> 29

<212> PRT

<213> Homo sapiens

<400> 64

Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro Gly
1 5 10 15

Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly Gly Ile 20 25

<210> 65

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<211>
       29
<212> PRT
<213> Homo sapiens
<400> 65
Pro Gly Ile Gly Lys Pro Gly Phe Pro Gly Pro Lys Gly Asp Arg Gly
Met Gly Gly Val Pro Gly Ala Leu Gly Pro Arg Gly Glu
<210> 66
<211> 27
<212> PRT
<213> Homo sapiens
<400> 66
Gly Pro Gln Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly Leu Gln Gly
Phe Pro Gly Lys Pro Gly Phe Leu Gly Glu Val
           20
<210> 67
<211> 27
<212> PRT
<213> Homo sapiens
<400> 67
Pro Gly Pro Gln Gly Tyr Pro Gly Val Gly Lys Pro Gly Met Pro Gly
               5
                                   10
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Met Pro Gly Lys Pro Gly Ala Met Gly Met Pro
20 25
<210> 68
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<211> 27

<212> PRT

<213> Homo sapiens

<400> 68

Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly 1 5 10 15

Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu Pro 20 25

<210> 69

<211> 27

<212> PRT

<213> Homo sapiens

<400> 69

Gly Pro Arg Gly Glu Lys Gly Pro Ile Gly Ala Pro Gly Ile Gly Gly 1 510151510

Pro Pro Gly Glu Pro Gly Leu Pro Gly Ile Pro 20 25

<210> 70

<211> 29

<212> PRT

<213> Homo sapiens

<400> 70

<212> PRT

<213> Homo sapiens

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Gly Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro Gly Met Arg Gly
                5
                                    10
Phe Pro Gly Pro Ile Gly Pro Lys Gly Glu His Gly Gln
            20
                                25
<210> 71
<211> 27
<212> PRT
<213> Homo sapiens
<400> 71
Gly Glu Pro Gly Pro Gln Gly Pro Ile Gly Val Pro Gly Val Gln Gly
                                    10
Pro Pro Gly Ile Pro Gly Ile Gly Lys Pro Gly
            20
<210> 72
<211> 27
<212> PRT
<213> Homo sapiens
<400> 72
Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly
Pro Met Gly Pro Pro Gly Ala Ile Gly Phe Pro
<210> 73
<211> 27
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<210> 76

<211> 27

<212> PRT

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<400> 73
Gly Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly Pro Ile Gly
Val Pro Gly Val Gln Gly Pro Pro Gly Ile Pro
            20
<210> 74
<211> 27
<212> PRT
<213> Homo sapiens
<400> 74
Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly Pro Lys Gly
                5
Leu Pro Gly Pro Gln Gly Leu Arg Gly Pro Lys
<210> 75
<211> 27
<212> PRT
<213> Homo sapiens
<400> 75
Gly Val Pro Gly Leu Pro Gly Val Pro Gly Leu Leu Gly Pro Lys Gly
                                   10
Glu Pro Gly Ile Pro Gly Asp Gln Gly Leu Gln
           20
                                25
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<213> Homo sapiens
<400> 76
Gly Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro Gly Met Arg Gly
                5
                                    10
Phe Pro Gly Pro Ile Gly Pro Lys Gly Glu His
<210> 77
<211> 27
<212> PRT
<213> Homo sapiens
<400> 77
Gly Phe Pro Gly Pro Ile Gly Pro Lys Gly Glu His Gly Gln Lys Gly
Val Pro Gly Leu Pro Gly Val Pro Gly Leu Leu
<210> 78
<211> 27
<212> PRT
<213> Homo sapiens
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Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly Lys Pro Gly Gln Asp Gly
Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys
            20
                               25
<210> 79
<211> 27
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20

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<212> PRT
<213> Homo sapiens
<400> 79
Pro Gly Pro Pro Gly Phe Pro Gly Ile Gly Lys Pro Gly Val Ala Gly
                                   10
Leu His Gly Pro Pro Gly Lys Pro Gly Ala Leu
            20
<210> 80
<211> 27
<212> PRT
<213> Homo sapiens
<400> 80
Gly Gln Asp Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly
Glu Gln Gly Leu Pro Gly Leu Pro Gly Pro Pro
            20
<210> 81
<211> 27
<212> PRT
<213> Homo sapiens
<400> 81
Gly Pro Ile Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly
                5
Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro
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<210> 82
<211> 27
<212> PRT
<213> Homo sapiens
<400> 82
Gly Pro Met Gly Pro Pro Gly Ala Ile Gly Phe Pro Gly Pro Lys Gly
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Glu Gly Gly Ile Val Gly Pro Gln Gly Pro Pro
<210> 83
<211> 29
<212> PRT
<213> Homo sapiens
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Gly Pro Ile Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly
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Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro Gly Ala
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<210> 84
<211> 27
<212> PRT
<213> Homo sapiens
<400> 84
Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly
               5
                                   10
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Pro Ile Gly Val Pro Gly Val Gln Gly Pro Pro

20 25

<210> 85

<211> 27

<212> PRT

<213> Homo sapiens

<400> 85

Pro Gly Val Gly Lys Pro Gly Met Pro Gly Met Pro Gly Lys Pro Gly

1 10 15

Ala Met Gly Met Pro Gly Ala Lys Gly Glu Ile 20 25

<210> 86

<211> 27

<212> PRT

<213> Homo sapiens

<400> 86

Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala Met Gly Met Pro Gly 1 5 10 15

Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile 20 25

<210> 87

<211> 27

<212> PRT

<213> Homo sapiens

<400> 87

Gly Glu Pro Gly Leu Gln Gly Phe Pro Gly Lys Pro Gly Phe Leu Gly 1 5 10 15

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Glu Val Gly Pro Pro Gly Met Arg Gly Phe Pro
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<210>
      88
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       27
<212> PRT
<213> Homo sapiens
<400> 88
Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly
                                   10
Pro Pro Ala Val Met Pro Pro Thr Pro Pro
            20
                               25
<210> 89
<211> 27
<212> PRT
<213> Homo sapiens
<400> 89
Gly Leu Pro Gly Val Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly
Ile Pro Gly Asp Gln Gly Leu Gln Gly Pro Pro
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<210> 90

<211> 27

<212> PRT

<213> Homo sapiens

<400> 90

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Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly Ile Pro Gly Asp Gln Gly
                                   10
Leu Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly
<210> 91
<211> 27
<212> PRT
<213> Homo sapiens
<400> 91
Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly Leu Pro Gly Leu Pro Gly
                           10
Pro Pro Gly Leu Pro Gly Ile Gly Lys Pro Gly
           20
<210> 92
<211> 27
<212> PRT
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<400> 92
Gly Phe Pro Gly Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro Gly
               5
                                                     15
Met Arg Gly Phe Pro Gly Pro Ile Gly Pro Lys
            20
<210> 93
<211> 27
<212> PRT
<213> Homo sapiens
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<212> PRT

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Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly
                                    10
Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr
            20
<210> 94
<211> 29
<212> PRT
<213> Homo sapiens
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Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly
               5
Leu Pro Gly Leu Pro Gly Pro Pro Gly Leu Pro Gly Ile
<210> 95
<211> 27
<212> PRT
<213> Homo sapiens
<400> 95
Pro Gly Ile Gly Lys Pro Gly Gln Asp Gly Ile Pro Gly Gln Pro Gly
Phe Pro Gly Gly Lys Gly Glu Gln Gly Leu Pro
           20
                               25
<210> 96
<211> 27
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<213> Homo sapiens
<400> 96
Gly Leu His Gly Pro Pro Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly
                                    10
Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro
<210> 97
<211> 29
<212> PRT
<213> Homo sapiens
<400> 97
Gln Gly Tyr Pro Gly Val Gly Lys Pro Gly Met Pro Gly Met Pro Gly
Lys Pro Gly Ala Met Gly Met Pro Gly Ala Lys Gly Glu
           20
                               25
<210> 98
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<213> Homo sapiens
<400> 98
Gly Gln Lys Gly Val Pro Gly Leu Pro Gly Val Pro Gly Leu Leu Gly
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Pro Lys Gly Glu Pro Gly Ile Pro Gly Asp Gln
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<210> 99

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<211> 27
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<213> Homo sapiens
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Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu Pro Gly Pro Pro Gly
Phe Pro Gly Ile Gly Lys Pro Gly Val Ala Gly
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Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile Gly Pro
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<211> 27
<212> PRT
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Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly
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Pro Pro Gly Pro Pro Pro Ala Val Met
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Gly Val Ala Gly Leu His Gly Pro Pro Gly Lys Pro Gly Ala Leu Gly
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Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro Pro
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<211> 27
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Pro Gly Pro Pro Gly Leu Pro Gly Ile Gly Lys Pro Gly Phe Pro Gly
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Pro Lys Gly Asp Arg Gly Met Gly Gly Val Pro
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<211> 29
<212> PRT
<213> Homo sapiens
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Gly Pro Pro Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly
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Leu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro
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<210> 105
<211> 27
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Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly Leu Pro Gly
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Leu Pro Gly Pro Pro Gly Leu Pro Gly Ile Gly
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<210> 106
<211> 29
<212> PRT
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<400> 106
Gly Lys Pro Gly Phe Pro Gly Pro Lys Gly Asp Arg Gly Met Gly Gly
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Val Pro Gly Ala Leu Gly Pro Arg Gly Glu Lys Gly Pro
<210> 107
<211> 15
<212> PRT
<213> Homo sapiens
<400> 107
Gly Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr Pro Pro
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15 10 5 1 <210> 108 <211> 29 <212> PRT <213> Homo sapiens <400> 108 Pro Gly Val Gly Lys Pro Gly Met Pro Gly Met Pro Gly Lys Pro Gly 5 Ala Met Gly Met Pro Gly Ala Lys Gly Glu Ile Gly Gln <210> 109 <211> 27 <212> PRT <213> Homo sapiens <400> 109 Gly Pro Lys Gly Glu His Gly Gln Lys Gly Val Pro Gly Leu Pro Gly 5 Val Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro 25 <210> 110 <211> 27 <212> PRT <213> Homo sapiens <400> 110 Gly Pro Gln Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu Pro Gly

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Pro Gln Gly Pro Ile Gly Val Pro Gly Val Gln
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Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro Pro Pro Pro
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Gly Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr Pro Pro Pro Gln
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Gly
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<211> 27
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Gly Met Pro Gly Lys Pro Gly Ala Met Gly Met Pro Gly Ala Lys Gly
Glu Ile Gly Gln Lys Gly Glu Ile Gly Pro Met
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<211> 27

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Gly Val Pro Gly Ala Leu Gly Pro Arg Gly Glu Lys Gly Pro Ile Gly
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Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro
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Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly Pro Lys Gly Leu Pro Gly
Pro Gln Gly Leu Arg Gly Pro Lys Gly Asp Lys
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<211> 27
<212> PRT
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Gly Pro Ile Gly Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly
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Leu Pro Gly Pro Pro Gly Phe Pro Gly Ile Gly
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<210> 119

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<213> Homo sapiens
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Gly Lys Pro Gly Val Ala Gly Leu His Gly Pro Pro Gly Lys Pro Gly
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Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro
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<211> 27
<212> PRT
<213> Homo sapiens
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Gly Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro Gly
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Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly
<210> 118
<211> 27
<212> PRT
<213> Homo sapiens
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Pro Gly Pro Val Gly Leu Pro Gly Val Gly Lys Pro Gly Val Thr Gly
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Phe Pro Gly Pro Gln Gly Pro Leu Gly Lys Pro
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Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly Pro Ile Gly Val Pro Gly
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Val Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly
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Pro Gly Val Gly Lys Pro Gly Val Thr Gly Phe Pro Gly Pro Gln Gly
Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu Pro
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<213> Homo sapiens
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Gly Ile Pro Gly Asp Gln Gly Leu Gln Gly Pro Pro Gly Ile Pro Gly
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Ile Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly Ile
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<212> PRT
<213> Homo sapiens
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Gly Glu Gly Gly Ile Val Gly Pro Gln Gly Pro Pro Gly Pro Lys Gly
Glu Pro Gly Leu Gln Gly Phe Pro Gly Lys Pro
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Gly Leu Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly
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Pro Ile Gly Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu
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Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly
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Pro Pro Ala Val Met Pro Pro Thr
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Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly Leu Gln Gly Phe Pro Gly
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Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro
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<212> PRT
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Gly Ile Pro Gly Asp Gln Gly Leu Gln Gly Pro Pro Gly Ile Pro Gly
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Ile Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro
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<210> 127
<211> 29
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<400> 127

<212> PRT

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Gly Glu Pro Gly Leu Gln Gly Phe Pro Gly Lys Pro Gly Phe Leu Gly 1 5 10 15
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Glu Val Gly Pro Pro Gly Met Arg Gly Phe Pro Gly Pro 20 25

<210> 128

<211> 44

<212> PRT

<213> Homo sapiens

<400> 128

Pro Pro Gly Lys Pro Gly Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu 1 5 10 15

Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Pro Ala Val Met 20 25 30

Pro Pro Thr Pro Pro Pro Gln Gly Glu Tyr Leu Pro 35

<210> 129

<211> 44

<212> PRT

<213> Homo sapiens

<400> 129

Met Pro Gly Ala Pro Gly Val Lys Gly Pro Pro Gly Met His Gly Pro 1 5 10 15

Pro Gly Pro Val Gly Leu Pro Gly Val Gly Lys Pro Gly Val Thr Gly 20 25 30

Phe Pro Gly Pro Gln Gly Pro Leu Gly Lys Pro Gly 35 40

<210> 130

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<211> 44
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<213> Homo sapiens
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Pro Gln Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro
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Gln Gly Pro Ile Gly Val Pro Gly Val Gln Gly Pro Pro Gly Ile Pro
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           20
Gly Ile Gly Lys Pro Gly Gln Asp Gly Ile Pro Gly
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<212> PRT
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Gly Pro Pro Gly Ile Pro Gly Ile Gly Gly Pro Ser Gly Pro Ile Gly
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               5
Pro Pro Gly Ile Pro Gly Pro Lys Gly Glu Pro Gly Leu
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Pro Gly Pro Pro Gly Pro Pro Pro Ala Val Met Pro Pro Thr
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Pro Pro
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<213> Homo sapiens
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Gly Glu Val Gly Pro Pro Gly Met Arg Gly Phe Pro Gly Pro Ile Gly
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Pro Lys Gly Glu His Gly Gln Lys Gly Val Pro
<210> 134
<211> 27
<212> PRT
<213> Homo sapiens
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Gly Glu His Gly Gln Lys Gly Val Pro Gly Leu Pro Gly Val Pro Gly
Leu Leu Gly Pro Lys Gly Glu Pro Gly Ile Pro
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<400> 135

<212> PRT

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Pro Lys Gly Leu Pro Gly Pro Gln Gly Leu Arg Gly Pro
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Gly Met Pro Gly Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile Gly
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Pro Met Gly Ile Pro Gly Pro Gln Gly Pro Pro
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<212> PRT
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Pro Gly Ile Gly Lys Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly
Pro Lys Gly Asp Arg Gly Pro Lys Gly Leu Pro Gly Pro Gln Gly Leu
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Arg Gly Pro
        35
,<210> 141
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Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln
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Gly Pro Lys Gly Glu His Gly Gln Lys Gly Val Pro Gly Leu Pro Gly
Val Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly Ile
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Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly Leu Pro Gly
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Leu Pro Gly Pro Pro Gly Leu Pro Gly Ile Gly Lys Pro
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<210> 144

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<400> 144
Gly Ala Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly Gly Ile Val Gly
Pro Gln Gly Pro Pro Gly Pro Lys Gly Glu Pro
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<211> 44
<212> PRT
<213> Homo sapiens
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Pro Lys Gly Glu Pro Gly Leu Pro Gly Pro Pro Gly Phe Pro Gly Ile
                                    10
                                                       15
               5
Gly Lys Pro Gly Val Ala Gly Leu His Gly Pro Pro Gly Lys Pro Gly
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Ala Leu Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly
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<211> 29
<212> PRT
<213> Homo sapiens
<400> 146
Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu Pro Gly Leu Pro Gly
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Ile Pro Gly Pro Met Gly Pro Pro Gly Ala Ile Gly Phe
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<210> 147
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<212> PRT
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Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly Pro Lys Gly
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Leu Pro Gly Pro Gln Gly Leu Arg Gly Pro Lys Gly Asp
<210> 148
<211> 29
<212> PRT
<213> Homo sapiens
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Gly Met Gly Gly Val Pro Gly Ala Leu Gly Pro Arg Gly Glu Lys Gly
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Pro Ile Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly Glu
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Leu Pro Gly Pro Pro Gly Phe Pro Gly Ile Gly Lys Pro
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Pro Gly Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr Pro Pro
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Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly Pro
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<211> 27
<212> PRT
<213> Homo sapiens
<400> 152
Gly Lys Pro Gly Ala Met Gly Met Pro Gly Ala Lys Gly Glu Ile Gly
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5

10

15

Gln Lys Gly Glu Ile Gly Pro Met Gly Ile Pro 20 25

<210> 153

<211> 29

<212> PRT

<213> Homo sapiens

<400> 153

Gly Phe Leu Gly Glu Val Gly Pro Pro Gly Met Arg Gly Phe Pro Gly 1 5 10 15

Pro Ile Gly Pro Lys Gly Glu His Gly Gln Lys Gly Val 20 25

<210> 154

<211> 27

<212> PRT

<213> Homo sapiens

<400> 154

Ser Leu Arg Gly Glu Gln Gly Pro Arg Gly Glu Pro Gly Pro Arg Gly 1 5 10 15

Pro Pro Gly Pro Pro Gly Leu Pro Gly His Gly 20 25

<210> 155

<211> 27

<212> PRT

<400> 155

Gly Pro Lys Gly Glu Pro Gly Leu Gln Gly Phe Pro Gly Lys Pro Gly
1 5 10 15

Phe Leu Gly Glu Val Gly Pro Pro Gly Met Arg
20 25

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<211> 754

<212> PRT

<213> Homo sapiens

<400> 156

Phe Asp Ser Ala Val Leu Ser Ser Ile Asn Val Met Ala Val Leu Pro 1 5 10 15

Gly Pro Leu Gln Leu Leu Gly Val Leu Leu Thr Ile Ser Leu Ser Ser 20 25 30

Ile Arg Leu Ile Gln Ala Gly Ala Tyr Tyr Gly Ile Lys Pro Leu Pro 35 40 45

Pro Gln Ile Pro Pro Gln Met Pro Pro Gln Ile Pro Gln Tyr Gln Pro 50 55 60

Leu Gly Gln Gln Val Pro His Met Pro Leu Ala Lys Asp Gly Leu Ala 65 70 75 80

Met Gly Lys Glu Met Pro His Leu Gln Tyr Gly Lys Glu Tyr Pro His 85 90 95

Leu Pro Gln Tyr Met Lys Glu Ile Gln Pro Ala Pro Arg Met Gly Lys
100 105 110

Glu Ala Val Pro Lys Lys Gly Lys Glu Ile Pro Leu Ala Ser Leu Arg 115 120 125

Gly Glu Gln Gly Pro Arg Gly Glu Pro Gly Pro Arg Gly Pro Pro Gly 130 135 140

Pro Pro Gly Leu Pro Gly His Gly Ile Pro Gly Ile Lys Gly Lys Pro Gly Pro Gln Gly Tyr Pro Gly Val Gly Lys Pro Gly Met Pro Gly Met Pro Gly Lys Pro Gly Ala Met Gly Met Pro Gly Ala Lys Gly Glu Ile Gly Gln Lys Gly Glu Ile Gly Pro Met Gly Ile Pro Pro Gln Gly Pro Pro Gly Pro His Gly Leu Pro Gly Ile Gly Lys Pro Gly Gly Pro Gly Leu Pro Gly Gln Pro Gly Pro Lys Gly Asp Arg Gly Pro Lys Gly Leu Pro Gly Pro Gln Gly Leu Arg Gly Pro Lys Gly Asp Lys Gly Phe Gly Met Pro Gly Ala Pro Gly Val Lys Gly Pro Pro Gly Met His Gly Pro Pro Gly Pro Val Gly Leu Pro Gly Val Gly Lys Pro Gly Val Thr Gly Phe Pro Gly Pro Gln Gly Pro Leu Gly Lys Pro Gly Ala Pro Gly Glu Pro Gly Pro Gln Gly Pro Ile Gly Val Pro Gly Val Gln Gly Pro Pro Gly Ile Pro Gly Ile Gly Lys Pro Gly Gln Asp Gly Ile Pro Gly Gln Pro Gly Phe Pro Gly Gly Lys Gly Glu Gln Gly Leu Pro Gly Leu Pro Gly Pro Pro Gly Leu Pro Gly Ile Gly Lys Pro Gly Phe Pro Gly Pro

Lys Gly Asp Arg Gly Met Gly Gly Val Pro Gly Ala Leu Gly Pro Arg 370 375 380

Gly Glu Lys Gly Pro Ile Gly Ala Pro Gly Ile Gly Gly Pro Pro Gly 385 390 395 400

Glu Pro Gly Leu Pro Gly Ile Pro Gly Pro Met Gly Pro Pro Gly Ala
405 410 415

Ile Gly Phe Pro Gly Pro Lys Gly Glu Gly Gly Ile Val Gly Pro Gln 420 425 430

Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly Leu Gln Gly Phe Pro Gly
435 440 445

Lys Pro Gly Phe Leu Gly Glu Val Gly Pro Pro Gly Met Arg Gly Phe 450 455 460

Pro Gly Pro Ile Gly Pro Lys Gly Glu His Gly Gln Lys Gly Val Pro 465 470 475 480

Gly Leu Pro Gly Val Pro Gly Leu Leu Gly Pro Lys Gly Glu Pro Gly 485 490 495

Ile Pro Gly Asp Gln Gly Leu Gln Gly Pro Pro Gly Ile Pro Gly Ile
500 505 510

Gly Gly Pro Ser Gly Pro Ile Gly Pro Pro Gly Ile Pro Gly Pro Lys 515 520 525

Gly Glu Pro Gly Leu Pro Gly Pro Pro Gly Phe Pro Gly Ile Gly Lys 530 535 540

Pro Gly Val Ala Gly Leu His Gly Pro Pro Gly Lys Pro Gly Ala Leu 545 550 555 560

Gly Pro Gln Gly Gln Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly 565 570 575

Pro Pro Gly Pro Pro Ala Val Met Pro Pro Thr Pro Pro Pro Gln Gly 580 585 590

Glu Tyr Leu Pro Asp Met Gly Leu Gly Ile Asp Gly Val Lys Pro Pro

595 600 605

His Ala Tyr Gly Ala Lys Lys Gly Lys Asn Gly Gly Pro Ala Tyr Glu 610 615 620

Met Pro Ala Phe Thr Ala Glu Leu Thr Ala Pro Phe Pro Pro Val Gly 625 630 635

Ala Pro Val Lys Phe Asn Lys Leu Leu Tyr Asn Gly Arg Gln Asn Tyr 645 650 655

Asn Pro Gln Thr Gly Ile Phe Thr Cys Glu Val Pro Gly Val Tyr Tyr 660 665 670

Phe Ala Tyr His Val His Cys Lys Gly Gly Asn Val Trp Val Ala Leu 675 680 685

Phe Lys Asn Asn Glu Pro Val Met Tyr Thr Tyr Asp Glu Tyr Lys Lys 690 695 700

Gly Phe Leu Asp Gln Ala Ser Gly Ser Ala Val Leu Leu Leu Arg Pro 705 710 715 720

Gly Asp Arg Val Phe Leu Gln Met Pro Ser Glu Gln Ala Ala Gly Leu 725 730 735

Tyr Ala Gly Gln Tyr Val His Ser Ser Phe Ser Gly Tyr Leu Leu Tyr 740 745 750

Pro Met

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<213> Homo sapiens

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| cctggga | ataa | cgcttttgaa | agcgaatcag | gaaattactt | aggaatcgga | agccccaaag | 120 |
| aattatg | gaat | aatcctcgct | gccaaaggga | aggggatttt | gagcaaaagc | tccacatctg | 180 |
| cgcacac | tag | agttcaaaga | ctccagctgt | tggaaggtct | tgtgagcaat | gtttgagagg | 240 |
| taagact | gga | ccgctaggtc | ttgccggtga | gaaaggggac | caaggaaaga | ctgggaagaa | 300 |
| aggacco | cata | tgaccatagg | gagagaaagg | agaagtaggt | ccaattggtc | ctcctggacc | 360 |
| caaggga | agac | agaggagaac | aaggggaccc | cgggctgcct | ggggttttgc | cgatgtggaa | 420 |
| gcatcct | ggc | tcaaatccgg | ctc | | | | 443 |
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| tacccagaag aaagactacc tattatattt aacaaggtcc tcttcaacga gggagagcac | 720 |
|---|------|
| tacaaccctg ccacagggaa gttcatctgt gctttcccag ggatctatta cttttcttat | 780 |
| gatatcacat tggctaataa gcatctggca atcggactgg tacacaatgg gcaataccgg | 840 |
| ataaagacct tcgacgccaa cacaggaaac catgatgtgg cttcggggtc cacagtcatc | 900 |
| tatctgcagc cagaagatga agtctggctg gagattttct tcacagacca gaatggcctc | 960 |
| ttctcagacc caggttgggc agacagctta ttctccgggt ttctcttata cgttgacaca | 1020 |
| gattacctag attccatatc agaagatgat gaattgtgat caggaccaag atccctgtgg | 1080 |
| taaacactct gattgaatct ggggttccag aaggtggaac aagcaggaat gggatccaaa | 1140 |
| gagactccca ctcagattct aaagcattta aagacaattc tagcagaatt tatcaaaaca | 1200 |
| agatgaaaca cagaaaagtt gaaaccacaa caaaatgaat tctattaaag aatagcccca | 1260 |
| gatataaatt ctcttgaaag caatgttcat aaatatttaa gcaaattaaa gacaatgtta | 1320 |
| acaaattttc tattaaatgc cctgagtgat aaaaccagtt ggcaataata ttgccttatt | 1380 |
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| ctaagagcaa gagccaaag atg ttt gtc ttg ctc tat gtt aca agt ttt gcc | 112 |
| Met Phe Val Leu Tyr Val Thr Ser Phe Ala 1 5 10 | |
| att tgt gcc agt gga caa ccc cgg ggt aat cag ttg aaa gga gag aac | 160 |
| Ile Cys Ala Ser Gly Gln Pro Arg Gly Asn Gln Leu Lys Gly Glu Asn 15 20 25 | |

| tac Tyr | tcc Ser | ccc Pro 30 | agg Arg | tat Tyr | atc Ile | tgc Cys | agc Ser 35 | att Ile | cct Pro | ggc Gly | ttg Leu | cct Pro 40 | gga Gly | cct Pro | cca Pro | 208 |
|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|------------------|------------------|-------------------|-------------------|-------------------|------------------|------------------|-----|
| ggg Gly | ccc Pro 45 | cct Pro | gga Gly | gca Ala | aat Asn | ggt Gly 50 | tcc Ser | cct Pro | Gly ggg | ccc Pro | cat His 55 | ggt Gly | cgc Arg | atc Ile | ggc Gly | 256 |
| ctt Leu 60 | cca Pro | gga Gly | aga Arg | gat Asp | ggt Gly 65 | aga Arg | gac Asp | ggc Gly | agg Arg | aaa Lys 70 | gga Gly | gag Glu | aaa Lys | ggt Gly | gaa Glu 75 | 304 |
| aag Lys | gga Gly | act Thr | gca Ala | ggt Gly 80 | ttg Leu | aga Arg | ggt Gly | aag Lys | act Thr 85 | gga Gly | ccg Pro | cta Leu | ggt Gly | ctt Leu 90 | gcc Ala | 352 |
| ggt Gly | gag Glu | aaa Lys | 95 Gly 999 | gac Asp | caa Gln | gga Gly | gag Glu | act Thr 100 | gly ggg | aag Lys | aaa Lys | gga Gly | ccc Pro 105 | ata Ile | gga Gly | 400 |
| cca Pro | gag Glu | gga Gly 110 | gag Glu | aaa Lys | gga Gly | gaa Glu | gta Val 115 | ggt Gly | cca Pro | att Ile | ggt Gly | cct Pro 120 | cct Pro | gga Gly | cca Pro | 448 |
| Lys | Gly 125 | Asp | Arg | Gly | Glu | Gln 130 | Gly | Asp | Pro | Gly | ctg Leu 135 | Pro | Gly | Val | Cys | 496 |
| Arg 140 | Cys | Gly | Ser | Ile | Val 145 | Leu | Lys | Ser | Ala | Phe 150 | tct Ser | Val | Gly | Ile | Thr 155 | 544 |
| Thr | Ser | Tyr | Pro | Glu 160 | Glu | Arg | Leu | Pro | Ile 165 | Ile | ttt Phe | Asn | Lys | Val 170 | Leu | 592 |
| Phe | Asn | Glu | Gly 175 | Glu | His | Tyr | Asn | Pro 180 | Ala | Thr | Gly aaa | Lys | Phe 185 | Ile | Cys | 640 |
| Ala | Phe | Pro 190 | Gly | Ile | Tyr | Tyr | Phe 195 | Ser | Tyr | Asp | atc Ile | Thr 200 | Leu | Ala | Asn | 688 |
| Lys | His 205 | Leu | Ala | Ile | Gly | Leu 210 | Val | His | Asn | Gly | caa Gln 215 | Tyr | Arg | Ile | Lys | 736 |
| Thr 220 | Phe | Asp | Ala | Asn | Thr 225 | Gly | Asn | His | Asp | Val 230 | gct Ala | Ser | Gly | Ser | Thr 235 | 784 |
| | | | | | | | | | | | ctg Leu | | | | | 832 |

| aca gac cag aat ggc ctc ttc tca gac cca ggt tgg gca gac agc tta Thr Asp Gln Asn Gly Leu Phe Ser Asp Pro Gly Trp Ala Asp Ser Leu 255 260 265 | 880 |
|---|------|
| ttc tcc ggg ttt ctc tta tac gtt gac aca gat tac cta gat tcc ata Phe Ser Gly Phe Leu Leu Tyr Val Asp Thr Asp Tyr Leu Asp Ser Ile 270 275 280 | 928 |
| tca gaa gat gat gaa ttg tga tcaggaccaa gatccctgtg gtaaacactc Ser Glu Asp Asp Glu Leu 285 | 979 |
| tgattgaatc tggggttcca gaaggtggaa caagcaggaa tgggatccaa agagactccc | 1039 |
| actcagattc taaagcattt aaagacaatt ctagcagaat ttatcaaaac aagatgaaac | 1099 |
| acagaaaagt tgaaaccaca acaaaatgaa ttctattaaa gaatagcccc agatataaat | 1159 |
| tctcttgaaa gcaatgttca taaatattta agcaaattaa agacaatgtt aacaaatttt | 1219 |
| ctattaaatg ccctgagtga taaaaccagt tggcaataat attgccttat taaatcttca | 1279 |
| aaaaataaaa aaaaaaaa | 1297 |
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| <210> 160 | |
| <211> 289 | |
| <212> PRT | |
| <213> Homo sapiens | |
| | |
| <400> 160 | |
| Met Phe Val Leu Leu Tyr Val Thr Ser Phe Ala Ile Cys Ala Ser Gly 1 5 10 15 | |
| Gln Pro Arg Gly Asn Gln Leu Lys Gly Glu Asn Tyr Ser Pro Arg Tyr 20 25 30 | |
| Ile Cys Ser Ile Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Ala 35 40 45 | |
| Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp 50 55 60 | |
| Gly Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu Lys Gly Thr Ala Gly 65 70 75 80 | |

Leu Arg Gly Lys Thr Gly Pro Leu Gly Leu Ala Gly Glu Lys Gly Asp 95 Gln Gly Glu Thr Gly Lys Lys Gly Pro Ile Gly Pro Glu Gly Glu Lys

105

Gly Glu Val Gly Pro Ile Gly Pro Pro Gly Pro Lys Gly Asp Arg Gly

100

Glu Gln Gly Asp Pro Gly Leu Pro Gly Val Cys Arg Cys Gly Ser Ile 130 135 140

Val Leu Lys Ser Ala Phe Ser Val Gly Ile Thr Thr Ser Tyr Pro Glu 145 150 155 160

Glu Arg Leu Pro Ile Ile Phe Asn Lys Val Leu Phe Asn Glu Gly Glu 165 170 175

His Tyr Asn Pro Ala Thr Gly Lys Phe Ile Cys Ala Phe Pro Gly Ile 180 185 190

Tyr Tyr Phe Ser Tyr Asp Ile Thr Leu Ala Asn Lys His Leu Ala Ile 195 200 205

Gly Leu Val His Asn Gly Gln Tyr Arg Ile Lys Thr Phe Asp Ala Asn 210 215 220

Thr Gly Asn His Asp Val Ala Ser Gly Ser Thr Val Ile Tyr Leu Gln 225 230 235 240

Pro Glu Asp Glu Val Trp Leu Glu Ile Phe Phe Thr Asp Gln Asn Gly 245 250 255

Leu Phe Ser Asp Pro Gly Trp Ala Asp Ser Leu Phe Ser Gly Phe Leu 260 265 270

Leu Tyr Val Asp Thr Asp Tyr Leu Asp Ser Ile Ser Glu Asp Asp Glu 275 280 285

Leu

<210> 161

<211> 870 <212> DNA

<213> Homo sapiens

| <400> 161 atgtttgtct | tgctctatgt | tacaagtttt | gccatttgtg | ccagtggaca | accccggggt | 60 |
|-------------------------|------------|------------|------------|------------|------------|-----|
| aatcagttga | aaggagagaa | ctactccccc | aggtatatct | gcagcattcc | tggcttgcct | 120 |
| ggacctccag | ggccccctgg | agcaaatggt | teceetggge | cccatggtcg | catcggcctt | 180 |
| ccaggaagag | atggtagaga | cggcaggaaa | ggagagaaag | gtgaaaaggg | aactgcaggt | 240 |
| ttgagaggta | agactggacc | gctaggtctt | gccggtgaga | aaggggacca | aggagagact | 300 |
| gggaagaaag | gacccatagg | accagaggga | gagaaaggag | aagtaggtcc | aattggtcct | 360 |
| cctggaccaa | agggagacag | aggagaacaa | ggggacccgg | ggctgcctgg | agtttgcaga | 420 |
| tgtggaagca | tcgtgctcaa | atccgccttt | tctgttggca | tcacaaccag | ctacccagaa | 480 |
| gaaagactac | ctattatatt | taacaaggtc | ctcttcaacg | agggagagca | ctacaaccct | 540 |
| gccacaggga | agttcatctg | tgctttccca | gggatctatt | acttttctta | tgatatcaca | 600 |
| ttggctaata | agcatctggc | aatcggactg | gtacacaatg | ggcaataccg | gataaagacc | 660 |
| ttcgacgcca | acacaggaaa | ccatgatgtg | gcttcggggt | ccacagtcat | ctatctgcag | 720 |
| ccagaagatg | aagtctggct | ggagattttc | ttcacagacc | agaatggcct | cttctcagac | 780 |
| ccaggttggg | cagacagctt | attctccggg | tttctcttat | acgttgacac | agattaccta | 840 |
| gattccatat | cagaagatga | tgaattgtga | | | | 870 |

<210> 162

<211> 16

<212> PRT

<213> Homo sapiens

<400> 162

Met Phe Val Leu Leu Tyr Val Thr Ser Phe Ala Ile Cys Ala Ser Gly
1 5 10 15

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<210> 163
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<211> 273

<212> PRT

<213> Homo sapiens

<400> 163

Gln Pro Arg Gly Asn Gln Leu Lys Gly Glu Asn Tyr Ser Pro Arg Tyr 1 5 10 15

Ile Cys Ser Ile Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Ala 20 25 30

Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp 35 40 45

Gly Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu Lys Gly Thr Ala Gly 50 55 60

Leu Arg Gly Lys Thr Gly Pro Leu Gly Leu Ala Gly Glu Lys Gly Asp
70 75 80

Gln Gly Glu Thr Gly Lys Lys Gly Pro Ile Gly Pro Glu Gly Glu Lys 85 90 95

Gly Glu Val Gly Pro Ile Gly Pro Pro Gly Pro Lys Gly Asp Arg Gly
100 105 110

Glu Gln Gly Asp Pro Gly Leu Pro Gly Val Cys Arg Cys Gly Ser Ile 115 120 125

Val Leu Lys Ser Ala Phe Ser Val Gly Ile Thr Thr Ser Tyr Pro Glu 130 135 140

Glu Arg Leu Pro Ile Ile Phe Asn Lys Val Leu Phe Asn Glu Gly Glu 145 150 155 160

His Tyr Asn Pro Ala Thr Gly Lys Phe Ile Cys Ala Phe Pro Gly Ile 165 170 175

Tyr Tyr Phe Ser Tyr Asp Ile Thr Leu Ala Asn Lys His Leu Ala Ile

180 185 190

Gly Leu Val His Asn Gly Gln Tyr Arg Ile Lys Thr Phe Asp Ala Asn 195 200 205

Thr Gly Asn His Asp Val Ala Ser Gly Ser Thr Val Ile Tyr Leu Gln 210 215 220

Pro Glu Asp Glu Val Trp Leu Glu Ile Phe Phe Thr Asp Gln Asn Gly 225 230 235 240

Leu Phe Ser Asp Pro Gly Trp Ala Asp Ser Leu Phe Ser Gly Phe Leu 245 250 255

Leu Tyr Val Asp Thr Asp Tyr Leu Asp Ser Ile Ser Glu Asp Asp Glu 260 265 270

Leu

<210> 164

<211> 36

<212> PRT

<213> Homo sapiens

<400> 164

Pro Ile Ile Phe Asn Lys Val Leu Phe Asn Glu Gly Glu His Tyr Asn 1 5 10 15

Pro Ala Thr Gly Lys Phe Ile Cys Ala Phe Pro Gly Ile Tyr Tyr Phe 20 25 30

Ser Tyr Asp Ile 35

<210> 165

<211> 27

<212> PRT

```
<213> Homo sapiens
<400> 165
Tyr Pro Glu Glu Arg Leu Pro Ile Ile Phe Asn Lys Val Leu Phe Asn
Glu Gly Glu His Tyr Asn Pro Ala Thr Gly Lys
<210> 166
<211> 20
<212> PRT
<213> Homo sapiens
<400> 166
Asp Val Ala Ser Gly Ser Thr Val Ile Tyr Leu Gln Pro Glu Asp Glu
                                   10
Val Trp Leu Glu
           20
<210> 167
<211> 22
<212> PRT
<213> Homo sapiens
<400> 167
Asp Val Ala Ser Gly Ser Thr Val Ile Tyr Leu Gln Pro Glu Asp Glu
                5
                                    10
Val Trp Leu Glu Ile Phe
            20
<210> 168
<211> 20
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<212> PRT
<213> Homo sapiens
<400> 168
Phe Ile Cys Ala Phe Pro Gly Ile Tyr Tyr Phe Ser Tyr Asp Ile Thr
Leu Ala Asn Lys
           20
<210> 169
<211> 27
<212> PRT
<213> Homo sapiens
<400> 169
Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp Gly
                                   10
Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu Lys
            20
<210> 170
<211> 27
<212> PRT
<213> Homo sapiens
<400> 170
Ser Ile Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Ala Asn Gly
                5
Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro
            20
```

```
<210> 171
<211> 27
<212> PRT
<213> Homo sapiens
<400> 171
Gly Pro Pro Gly Pro Pro Gly Ala Asn Gly Ser Pro Gly Pro His Gly
                                   10
Arg Ile Gly Leu Pro Gly Arg Asp Gly Arg Asp
<210> 172
<211> 29
<212> PRT
<213> Homo sapiens
<400> 172
Gly Pro Pro Gly Ala Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly
               5
                                   10
Leu Pro Gly Arg Asp Gly Arg Asp Gly Arg Lys Gly Glu
                               25
            20
<210> 173
<211> 29
<212> PRT
<213> Homo sapiens
<400> 173
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Lys Lys Gly Pro Ile Gly Pro Glu Gly Glu Lys Gly Glu

5

Gly Pro Leu Gly Leu Ala Gly Glu Lys Gly Asp Gln Gly Glu Thr Gly

10

20 25

<210> 174

<211> 27

<212> PRT

<213> Homo sapiens

<400> 174

Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Ala Asn Gly Ser Pro Gly 1 5 10 15

Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp 20 25

<210> 175

<211> 29

<212> PRT

<213> Homo sapiens

<400> 175

Gly Lys Lys Gly Pro Ile Gly Pro Glu Gly Glu Lys Gly Glu Val Gly 1 $$ 5 $$ 10 $$ 15

Pro Ile Gly Pro Pro Gly Pro Lys Gly Asp Arg Gly Glu 20 25

<210> 176

<211> 11

<212> PRT

<213> Homo sapiens

<400> 176

Ala Asp Ser Leu Phe Ser Gly Phe Leu Leu Tyr
1 5 10

```
<210> 177
<211> 27
<212> PRT
<213> Homo sapiens
<400> 177
Gly Pro Pro Gly Ala Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly
                                    10
Leu Pro Gly Arg Asp Gly Arg Asp Gly Arg Lys
            20
<210> 178
<211> 29
<212> PRT
<213> Homo sapiens
<400> 178
Gly Ala Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly
                                                        15
                5
                                    10
Arg Asp Gly Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu
<210> 179
<211> 27
<212> PRT
<213> Homo sapiens
<400> 179
Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Arg Lys Gly Glu Lys Gly
                                    10
                5
```

```
Glu Lys Gly Thr Ala Gly Leu Arg Gly Lys Thr
<210> 180
<211> 27
<212> PRT
<213> Homo sapiens
<400> 180
Gly Glu Lys Gly Glu Val Gly Pro Ile Gly Pro Pro Gly Pro Lys Gly
Asp Arg Gly Glu Gln Gly Asp Pro Gly Leu Pro
            20
<210> 181
<211> 29
<212> PRT
<213> Homo sapiens
<400> 181
Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp Gly
Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu Lys Gly Thr
<210> 182
<211> 305
<212> PRT
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<400> 182

<213> Homo sapiens

Ser Ser Lys Thr Pro Ala Val Gly Arg Ser Cys Glu Gln Glu Pro Lys 1 5 10 15

Met Phe Val Leu Leu Tyr Val Thr Ser Phe Ala Ile Cys Ala Ser Gly 20 25 30

Gln Pro Arg Gly Asn Gln Leu Lys Gly Glu Asn Tyr Ser Pro Arg Tyr 35 40 45

Ile Cys Ser Ile Pro Gly Leu Pro Gly Pro Pro Gly Pro Pro Gly Ala 50 55 60

Asn Gly Ser Pro Gly Pro His Gly Arg Ile Gly Leu Pro Gly Arg Asp 65 70 75 80

Gly Arg Asp Gly Arg Lys Gly Glu Lys Gly Glu Lys Gly Thr Ala Gly
85 90 95

Leu Arg Gly Lys Thr Gly Pro Leu Gly Leu Ala Gly Glu Lys Gly Asp 100 105 110

Gln Gly Glu Thr Gly Lys Lys Gly Pro Ile Gly Pro Glu Gly Glu Lys
115 120 125

Gly Glu Val Gly Pro Ile Gly Pro Pro Gly Pro Lys Gly Asp Arg Gly 130 135 140

Glu Gln Gly Asp Pro Gly Leu Pro Gly Val Cys Arg Cys Gly Ser Ile 145 150 155 160

Val Leu Lys Ser Ala Phe Ser Val Gly Ile Thr Thr Ser Tyr Pro Glu 165 170 175

Glu Arg Leu Pro Ile Ile Phe Asn Lys Val Leu Phe Asn Glu Gly Glu 180 185 190

His Tyr Asn Pro Ala Thr Gly Lys Phe Ile Cys Ala Phe Pro Gly Ile 195 200 205

Tyr Tyr Phe Ser Tyr Asp Ile Thr Leu Ala Asn Lys His Leu Ala Ile 210 215 220

Gly Leu Val His Asn Gly Gln Tyr Arg Ile Lys Thr Phe Asp Ala Asn

225

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| Thr | Gly | Asn | His | Asp | Val | Ala | Ser | Gly | Ser | Thr | Val | Ile | Tyr | Leu | Gln |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | - | | | 245 | | | | | 250 | | | | | 255 | |

Pro Glu Asp Glu Val Trp Leu Glu Ile Phe Phe Thr Asp Gln Asn Gly 260 265 270

Leu Phe Ser Asp Pro Gly Trp Ala Asp Ser Leu Phe Ser Gly Phe Leu 275 280 285

Leu Tyr Val Asp Thr Asp Tyr Leu Asp Ser Ile Ser Glu Asp Asp Glu 290 295 300

Leu 305

e La

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<210> 183

<211> 414

<212> DNA

<213> Homo sapiens

<400> 183

aggaaggetg attitatita geegittett tittetiggi tigeacagta tetggigeta 60 geetgeagee etaggiteea giteagagie tigeatetga accatgagga tetggiggit 120 tetgetigee attigaaatet geacagggaa cataaaetea eaggacaeet geaggeaagg 180 geaceetgge ateeetggga acceeggtea eaatggietg eetiggaagag atggaegaga 240 eggagegaag gitgacaaag gegatgeagg agaaceagga egteetggea geeegggaa 300 ggatgggaeg agtggagaa agggagaaeg aggageagat ggaaaagtig aagcaaaagg 360 eateaaaggt gateaagget eaagaggate eeagaaaaea tiggeeeeaag gigge 414

<210> 184

<211> 792

<212> DNA

<213> Homo sapiens

| <400> 184 aggaaggctg | attttattta | gccgtttctt | ttttcttggt | ttgcacagta | tctgggtcca | 60 |
|-------------------------|------------|--------------|-------------------|-------------|---------------|-----|
| gcctgcagcc | ctagggtcca | gttcagagtc | tgtcatctga | accatgagga | tctggtggtt | 120 |
| tctgcttgcc | attgaaatct | gcacagggaa | cataaactca | caggacacct | gcaggcaagg | 180 |
| gcaccctggc | atccctggga | accccggtca | caatggtctg | cctggaagag | atggacgaga | 240 |
| cggagcgaag | ggtgacaaag | gcgatgcagg | agaaccagga | cgtcctggca | gcccggggaa | 300 |
| ggatgggacg | agtggagaga | agggagaacg | aggagcagat | ggaaaagttg | aagcaaaagg | 360 |
| catcaaaggt | gatcaaggct | caatgaggat | ccccaggaaa | acatggcccc | aaggggcttg | 420 |
| cagggcccat | gggagagaaa | ggcctccgag | gagagactgg | gcctcagggg | cagaagggga | 480 |
| ataagggtga | cgtgggtccc | actggtcctg | aggggccaag | gggcaacatt | gggcctttgg | 540 |
| gcccaactgg | tttaccgggc | cccatgggcc | ctattggaaa | gcctggtccc | aagggagaag | 600 |
| ctggacccac | ggggccccag | ggtgagccag | gagtccgggg | aataagaggc | tggaaaggag | 660 |
| atcgaggaga | gaaagggaaa | atcggtgaga | ctctagtctt | gccaaaaagt | gctttcactg | 720 |
| tggggctcac | ggtgctgagc | aagtttcctt | cttcagatgt | gcccattaaa | tttgataaga | 780 |
| tccacatcac | tg | | | | | 792 |
| <210> 185 | | | | | | |
| <211> 951 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <220> | | | | | | |
| <221> CDS | | | | | | |
| <222> (18) | (884) | | | | | |
| <223> | | | | | | |
| | | | | | | |
| <400> 185 agtctgtcat | | g agg atc to | | | | 50 |
| | Met 1 | : Arg Ile Tı | rp Trp Leu I 5 | Leu Leu Ala | Ile Glu 10 | |

| atc Ile | tgc Cys | aca Thr | 999 Gly 15 | aac Asn | ata Ile | aac Asn | tca Ser | cag Gln 20 | gac Asp | acc Thr | tgc Cys | agg Arg | caa Gln 25 | gly aaa | cac His | 98 |
|------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|------------------|-----|
| cct Pro | ggc Gly | atc Ile 30 | cct Pro | gly 999 | aac Asn | ccc Pro | ggt Gly 35 | cac His | aat Asn | ggt Gly | ctg Leu | cct Pro 40 | gga Gly | aga Arg | gat Asp | 146 |
| gga Gly | cga Arg 45 | gac Asp | gga Gly | gcg Ala | aag Lys | ggt Gly 50 | gac Asp | aaa Lys | ggc Gly | gat Asp | gca Ala 55 | gga Gly | gaa Glu | cca Pro | gga Gly | 194 |
| cgt Arg 60 | cct Pro | ggc Gly | agc Ser | ccg Pro | 999 Gly 65 | aag Lys | gat Asp | Gly ggg | acg Thr | agt Ser 70 | gga Gly | gag Glu | aag Lys | gga Gly | gaa Glu 75 | 242 |
| | | | | | aaa Lys | | | | | | | | | | | 290 |
| ggc | tca Ser | aga Arg | gga Gly 95 | tcc Ser | cca Pro | gga Gly | aaa Lys | cat His 100 | ggc Gly | ccc Pro | aag Lys | Gly aaa | ctt Leu 105 | gca Ala | Gly 999 | 338 |
| ccc Pro | atg Met | gga Gly 110 | gag Glu | aag Lys | ggc Gly | ctc Leu | cga Arg 115 | gga Gly | gag Glu | act Thr | gly ggg | cct Pro 120 | cag Gln | gly aaa | cag Gln | 386 |
| aag Lys | 999 Gly 125 | aat Asn | aag Lys | ggt Gly | gac Asp | gtg Val 130 | ggt Gly | ccc Pro | act Thr | ggt Gly | cct Pro 135 | gag Glu | gly aaa | cca Pro | agg Arg | 434 |
| | | | | | ttg Leu 145 | | | | | | | | | | | 482 |
| cct Pro | att Ile | gga Gly | aag Lys | cct Pro 160 | ggt Gly | ccc Pro | aaa Lys | gga Gly | gaa Glu 165 | gct Ala | gga Gly | ccc Pro | acg Thr | 999 Gly 170 | ccc Pro | 530 |
| | | | | | aaa Lys | | | | | | | | | | | 578 |
| | | | | | gcg Ala | | | | | | | | | | | 626 |
| | | | | | cac His | | | | | | | | | | | 674 |
| | | | | | gga Gly 225 | | | | | | | | | | | 722 |
| atg | agc | tct | gag | gac | cag | gcc | tct | ggc | ggc | att | gtc | ctg | cag | ctg | aag | 770 |

| Met Ser Ser Glu Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys 240 245 250 | |
|---|-----|
| ctc ggg gat gag gtg tgg ctg cag gtg aca gga gga gag agg ttc aat Leu Gly Asp Glu Val Trp Leu Gln Val Thr Gly Gly Glu Arg Phe Asn 255 260 265 | 818 |
| ggc ttg ttt gct gat gag gac gat gac aca act ttc aca ggg ttc ctt Gly Leu Phe Ala Asp Glu Asp Asp Asp Thr Thr Phe Thr Gly Phe Leu 270 275 280 | 866 |
| ctg ttc agc agc ccg tga cagaggagag tttaaaaaatc cgccacacca Leu Phe Ser Ser Pro 285 | 914 |
| tccatcagaa tcagcttggg atgaacttat tcagatg | 951 |
| <210> 186 | |
| <211> 288 | |
| <212> PRT | |
| <213> Homo sapiens | |
| | |
| <400> 186 | |
| | |
| Met Arg Ile Trp Trp Leu Leu Leu Ala Ile Glu Ile Cys Thr Gly Asn 1 5 10 15 | |
| | |
| 1 5 10 15 Ile Asn Ser Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly | |
| 1 5 10 15 Ile Asn Ser Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly 25 30 Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala | |
| 10 15 Ille Asn Ser Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ille Pro Gly 25 30 Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala 45 Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro | |
| 1 | |

Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly 115 120 125

Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro 130 135 140

Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro 145 150 155 160

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Asp Met Pro Ile 165 170 175

Lys Phe Asp Lys Ile Leu Tyr Asn Glu Phe Asn His Tyr Asp Thr Ala 180 185 190

Ala Gly Lys Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr 195 200 205

His Ile Thr Val Phe Ser Arg Asn Val Gln Val Ser Leu Val Lys Asn 210 215 220

Gly Val Lys Ile Leu His Thr Lys Asp Ala Tyr Met Ser Ser Glu Asp 225 230 235 240

Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu Val 245 250 255

Trp Leu Gln Val Thr Gly Gly Glu Arg Phe Asn Gly Leu Phe Ala Asp 260 265 270

Glu Asp Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser Ser Pro 275 280 285

<210> 187

<211> 867

<212> DNA

<213> Homo sapiens

<400> 187
atgaggatet ggtggettet gettgecatt gaaatetgea cagggaacat aaacteacag

| gacacctgca | ggcaagggca | ccctggcatc | cctgggaacc | ccggtcacaa | tggtctgcct | 120 |
|------------|------------|------------|------------|------------|------------|-----|
| ggaagagatg | gacgagacgg | agcgaagggt | gacaaaggcg | atgcaggaga | accaggacgt | 180 |
| cctggcagcc | cggggaagga | tgggacgagt | ggagagaagg | gagaacgagg | agcagatgga | 240 |
| aaagttgaag | caaaaggcat | caaaggtgat | caaggctcaa | gaggatcccc | aggaaaacat | 300 |
| ggccccaagg | ggcttgcagg | gcccatggga | gagaagggcc | tccgaggaga | gactgggcct | 360 |
| caggggcaga | aggggaataa | gggtgacgtg | ggtcccactg | gtcctgaggg | gccaaggggc | 420 |
| aacattgggc | ctttgggccc | aactggttta | ccgggcccca | tgggccctat | tggaaagcct | 480 |
| ggtcccaaag | gagaagctgg | acccacgggg | ccccaggata | tgcccattaa | atttgataag | 540 |
| atcctgtata | acgaattcaa | ccattatgat | acagcagcgg | ggaaattcac | gtgccacatt | 600 |
| gctggggtct | attacttcac | ctaccacatc | actgttttct | ccaggaatgt | tcaggtgtct | 660 |
| ttggtcaaaa | atggagtaaa | aatactgcac | accaaagatg | cttacatgag | ctctgaggac | 720 |
| caggcctctg | gcggcattgt | cctgcagctg | aagctcgggg | atgaggtgtg | gctgcaggtg | 780 |
| acaggaggag | agaggttcaa | tggcttgttt | gctgatgagg | acgatgacac | aactttcaca | 840 |
| gggttccttc | tgttcagcag | cccgtga | | | | 867 |

<211> 19

<212> PRT

<213> Homo sapiens

<400> 188

Met Arg Ile Trp Trp Leu Leu Leu Ala Ile Glu Ile Cys Thr Gly Asn 1 5 10 15

Ile Asn Ser

<210> 189

<211> 269

<212> PRT

<213> Homo sapiens

<400> 189

Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly
1 5 10 15

His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp 20 25 30

Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly Lys Asp 35 40 45

Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly Lys Val Glu 50 55 60

Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys 65 70 75 80

His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg 85 90 95

Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly Asp Val Gly 100 105 110

Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro 115 120 125

Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys 130 135 140

Gly Glu Ala Gly Pro Thr Gly Pro Gln Asp Met Pro Ile Lys Phe Asp 145 150 155 160

Lys Ile Leu Tyr Asn Glu Phe Asn His Tyr Asp Thr Ala Ala Gly Lys 165 170 175

Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr His Ile Thr 180 185 190

Val Phe Ser Arg Asn Val Gln Val Ser Leu Val Lys Asn Gly Val Lys
195 200 205

Ile Leu His Thr Lys Asp Ala Tyr Met Ser Ser Glu Asp Gln Ala Ser 210 215 220

Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu Val Trp Leu Gln 225 230 235 240

Val Thr Gly Gly Glu Arg Phe Asn Gly Leu Phe Ala Asp Glu Asp Asp 245 250 255

Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser Ser Pro 260 265

<210> 190

<211> 36

<212> PRT

<213> Homo sapiens

<400> 190

Pro Ile Lys Phe Asp Lys Ile Leu Tyr Asn Glu Phe Asn His Tyr Asp 1 5 10 15

Thr Ala Ala Gly Lys Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe 20 25 30

Thr Tyr His Ile 35

<210> 191

<211> 22

<212> PRT

<213> Homo sapiens

<400> 191

Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu

1 10 15

Val Trp Leu Gln Val Thr

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<210> 192
<211> 20
<212> PRT
<213> Homo sapiens
<400> 192
Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
Val Trp Leu Gln
           20
<210> 193
<211> 20
<212> PRT
<213> Homo sapiens
<400> 193
Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr His Ile Thr
                                   10
Val Phe Ser Arg
            20
<210> 194
<211> 27
<212> PRT
<213> Homo sapiens
<400> 194
Thr Gly Pro Gln Asp Met Pro Ile Lys Phe Asp Lys Ile Leu Tyr Asn
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10

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Glu Phe Asn His Tyr Asp Thr Ala Ala Gly Lys
20 25
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<211> 27

<212> PRT

<213> Homo sapiens

<400> 195

Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly 1 5 10 15

Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala 20 25

<210> 196

<211> 27

<212> PRT

<213> Homo sapiens

<400> 196

Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly 1 5 10 15

Glu Ala Gly Pro Thr Gly Pro Gln Asp Met Pro 20 25

<210> 197

<211> 29

<212> PRT

<213> Homo sapiens

<400> 197

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Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly
                                    10
Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu
<210>
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<211> 29
<212> PRT
<213> Homo sapiens
<400> 198
Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu
<210> 199
<211> 29
<212> PRT
<213> Homo sapiens
<400> 199
Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly
               5
Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg Gly Glu
           20
<210> 200
<211> 27
<212> PRT
<213> Homo sapiens
```

<212> PRT

```
<400> 200
Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
                5
                                   10
Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys
<210> 201
<211> 27
<212> PRT
<213> Homo sapiens
<400> 201
Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly
                                   10
Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro
           20
<210> 202
<211> 27
<212> PRT
<213> Homo sapiens
<400> 202
Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly
Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro
            20
<210> 203
<211> 29
```

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<213> Homo sapiens
<400> 203
Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
                                   10
Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp
           20
<210> 204
<211> 27
<212> PRT
<213> Homo sapiens
<400> 204
Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
                                   10
Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg
           20
<210> 205
<211> 29
<212> PRT
<213> Homo sapiens
<400> 205
Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
           5
Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu
           20
                               25
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<211> 10

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<211> 29
<212> PRT
<213> Homo sapiens
<400> 206
Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala
<210> 207
<211> 29
<212> PRT
<213> Homo sapiens
<400> 207
Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly
                                   10
Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro
<210> 208
<211> 11
<212> PRT
<213> Homo sapiens
<400> 208
Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe
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<212> PRT
<213> Homo sapiens
<400> 209
Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser
               5
<210> 210
<211> 27
<212> PRT
<213> Homo sapiens
<400> 210
Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys
            20
<210> 211
<211> 27
<212> PRT
<213> Homo sapiens
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Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly
Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys
            20
<210> 212
<211> 27
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<212> PRT
<213> Homo sapiens
<400> 212
Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly
                                   10
Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys
           20
<210> 213
<211> 29
<212> PRT
<213> Homo sapiens
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Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly
               5
                                   10
Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu
<210> 214
<211> 1176
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)..(1176)
<223> n = A, T, G, or C
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<220>

<221> CDS

<222> (18)..(920)

<223>

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|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------|-------------------|-------------------|-------------------|-----|
| atc Ile | tgc Cys | aca Thr | 999 Gly 15 | aac Asn | ata Ile | aac Asn | tca Ser | cag Gln 20 | gac Asp | acc Thr | tgc Cys | agg Arg | caa Gln 25 | Gly aaa | cac His | 98 |
| cct Pro | ggc Gly | atc Ile 30 | cct Pro | Gly 999 | aac Asn | ccc Pro | ggt Gly 35 | cac His | aat Asn | ggt Gly | ctg Leu | cct Pro 40 | gga Gly | aga Arg | gat Asp | 146 |
| gga Gly | cga Arg 45 | gac Asp | gga Gly | gcg Ala | aag Lys | ggt Gly 50 | gac Asp | aaa Lys | ggc Gly | gat Asp | gca Ala 55 | gga Gly | gaa Glu | cca Pro | gga Gly | 194 |
| cgt Arg 60 | cct Pro | ggc Gly | agc Ser | ccg Pro | 999 Gly 65 | aag Lys | gat Asp | Gly ggg | acg Thr | agt Ser 70 | gga Gly | gag Glu | aag Lys | gga Gly | gaa Glu 75 | 242 |
| cga Arg | gga Gly | gca Ala | gat Asp | gga Gly 80 | aaa Lys | gtt Val | gaa Glu | gca Ala | aaa Lys 85 | ggc Gly | atc Ile | aaa Lys | ggt Gly | gat Asp 90 | caa Gln | 290 |
| ggc Gly | tca Ser | aga Arg | gga Gly 95 | tcc Ser | cca Pro | gga Gly | aaa Lys | cat His 100 | ggc Gly | ccc Pro | aag Lys | gly aaa | ctt Leu 105 | gca Ala | Gly 999 | 338 |
| ccc Pro | atg Met | gga Gly 110 | gag Glu | aag Lys | ggc Gly | ctc Leu | cga Arg 115 | gga Gly | gag Glu | act Thr | gly ggg | cct Pro 120 | cag Gln | gly ggg | cag Gln | 386 |
| aag Lys | 999 Gly 125 | aat Asn | aag Lys | ggt Gly | gac Asp | gtg Val 130 | ggt Gly | ccc Pro | act Thr | ggt Gly | cct Pro 135 | gag Glu | Gly 333 | cca Pro | agg Arg | 434 |
| ggc Gly 140 | aac Asn | att Ile | Gly aaa | cct Pro | ttg Leu 145 | ggc Gly | Pro | Thr | Gly | tta Leu 150 | Pro | Gly | Pro | atg Met | ggc Gly 155 | 482 |
| cct Pro | att Ile | gga Gly | aag Lys | cct Pro 160 | ggt Gly | ccc Pro | aag Lys | gga Gly | gaa Glu 165 | gct Ala | gga Gly | ccc Pro | acg Thr | 999 Gly 170 | ccc Pro | 530 |
| cag Gln | ggt Gly | gag Glu | cca Pro 175 | gga Gly | gtc Val | cgg Arg | gga Gly | ata Ile 180 | aga Arg | ggc Gly | tgg Trp | aaa Lys | gga Gly 185 | gat Asp | cga Arg | 578 |

| gga g Gly G | gag Glu | aaa Lys 190 | gly ggg | aaa Lys | atc Ile | ggt Gly | gag Glu 195 | act Thr | cta Leu | gtc Val | ttg Leu | cca Pro 200 | aaa Lys | agt Ser | gct Ala | 626 |
|-----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------|
| ttc a Phe T | act Thr 205 | gtg Val | gly ggg | ctc Leu | acg Thr | gtg Val 210 | ctg Leu | agc Ser | aag Lys | ttt Phe | cct Pro 215 | tct Ser | tca Ser | gat Asp | gtg Val | 674 |
| ccc a Pro I 220 | att Ile | aaa Lys | ttt Phe | gat Asp | aag Lys 225 | atc Ile | cac His | atc Ile | act Thr | gtt Val 230 | ttc Phe | tcc Ser | agg Arg | aat Asn | gtt Val 235 | 722 |
| cag g Gln V | gtg Val | tct Ser | ttg Leu | gtc Val 240 | aaa Lys | aac Asn | gga Gly | gta Val | aaa Lys 245 | ata Ile | ctg Leu | cac His | acc Thr | aga Arg 250 | gat Asp | 770 |
| gct t Ala T | tac Tyr | gtg Val | agc Ser 255 | tct Ser | gag Glu | gac Asp | cag Gln | gcc Ala 260 | tct Ser | ggc Gly | agc Ser | att Ile | gtc Val 265 | ctg Leu | cag Gln | 818 |
| ctg a Leu I | aag Lys | ctc Leu 270 | Gly 999 | gat Asp | gag Glu | atg Met | tgg Trp 275 | tgt Cys | gtg Val | att Ile | cat His | cgt Arg 280 | gtg Val | gca Ala | aaa Lys | 866 |
| tgt c Cys I | ctc Leu 285 | tcc Ser | atc Ile | tgt Cys | gat Asp | cct Pro 290 | ttt Phe | aca Thr | gtg Val | gcg Ala | tct Ser 295 | tgt Cys | gtg Val | cgc Arg | tct Ser | 914 |
| cga t Arg 300 | tga | 393¢ | caagg | gtc a | accto | etgct | it tg | gaggg | ggccg | g ggt | ttag | gtgg | tcto | cctac | ecc | 970 |
| agagt | tgto | gg g | gtcc | gggaa | ac to | gctto | ctgca | a tga | agcco | cctt | gcto | ccac | gtg a | aatct | gaata | 1030 |
| gttc | gtto | etg g | gcagt | ggc | gg tg | gaatt | cgto | c ctg | gccag | ggac | ccgo | eccto | ctg (| catac | cactca | 1090 |
| ggcgc | caco | ccc t | gcta | aaago | cc ct | ttaa | actto | c ago | egeta | acaa | gtc | cttgo | ctt a | anaa | agccta | 1150 |
| tccct | ttgr | ngc (| gntca | acag | gc cg | ggatt | 5 | | | | | | | | | 1176 |

<211> 300

<212> PRT

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(1176)

<223> n = A, T, G, or C

<400> 215

Met Arg Ile Trp Trp Leu Leu Leu Ala Ile Glu Ile Cys Thr Gly Asn 1 5 10 15

Ile Asn Ser Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly 20 25 30

Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala 35 40 45

Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro 50 55 60

Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly 65 70 75 80

Lys Val Glu Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser 85 90 95

Pro Gly Lys His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys
100 105 110

Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly 115 120 125

Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro 130 135 140

Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro 145 150 155 160

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly 165 170 175

Val Arg Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys 180 185 190

Ile Gly Glu Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu 195 200 205

| Thr | Val | Leu | Ser | Lys | Phe | Pro | Ser | Ser | Asp | Val | Pro | Ile | Lys | Phe | Asp |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 210 | | | | | 215 | | | | | 220 | | | | |

Lys Ile His Ile Thr Val Phe Ser Arg Asn Val Gln Val Ser Leu Val 225 230 235 240

Lys Asn Gly Val Lys Ile Leu His Thr Arg Asp Ala Tyr Val Ser Ser 245 250 255

Glu Asp Gln Ala Ser Gly Ser Ile Val Leu Gln Leu Lys Leu Gly Asp 260 265 270

Glu Met Trp Cys Val Ile His Arg Val Ala Lys Cys Leu Ser Ile Cys 275 280 285

Asp Pro Phe Thr Val Ala Ser Cys Val Arg Ser Arg 290 295 300

<210> 216

<211> 903

<212> DNA

<213> Homo sapiens

<400> 216 atgaggatet ggtggettet gettgeeatt gaaatetgea cagggaacat aaacteacag 60 gacacetgea ggcaagggea ecetggeate eetgggaace eeggteacaa tggtetgeet 120 ggaagagatg gacgagacgg agcgaagggt gacaaaggcg atgcaggaga accaggacgt 180 cctggcagcc cggggaagga tgggacgagt ggagagaagg gagaacgagg agcagatgga 240 aaagttgaag caaaaggcat caaaggtgat caaggctcaa gaggatcccc aggaaaacat 300 360 ggccccaagg ggcttgcagg gcccatggga gagaagggcc tccgaggaga gactgggcct caggggcaga aggggaataa gggtgacgtg ggtcccactg gtcctgaggg gccaaggggc 420 aacattgggc ctttgggccc aactggttta ccgggcccca tgggccctat tggaaagcct 480 ggtcccaagg gagaagctgg acccacgggg ccccagggtg agccaggagt ccggggaata 540 agaggctgga aaggagatcg aggagagaaa gggaaaatcg gtgagactct agtcttgcca 600 aaaagtgett teactgtggg geteacggtg etgageaagt tteettette agatgtgeee 660

| attaaatttg | ataagatcca | catcactgtt | ttctccagga | atgttcaggt | gtctttggtc | 720 |
|------------|------------|------------|------------|------------|------------|-----|
| aaaaacggag | taaaaatact | gcacaccaga | gatgcttacg | tgagctctga | ggaccaggcc | 780 |
| tctggcagca | ttgtcctgca | gctgaagctc | ggggatgaga | tgtggtgtgt | gattcatcgt | 840 |
| gtggcaaaat | gtctctccat | ctgtgatcct | tttacagtgg | cgtcttgtgt | gcgctctcga | 900 |
| tga | | | | | | 903 |

<211> 281

<212> PRT

<213> Homo sapiens

<400> 217

Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly
1 5 10 15

His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp 20 25 30

Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly Lys Asp 35 40 45

Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly Lys Val Glu 50 55 60

Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys 65 70 75 80

His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg 85 90 95

Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly Asp Val Gly
100 105 110

Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro 115 120 125

Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys 130 135 140 Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly Val Arg Gly 145 150 155 160

Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys Ile Gly Glu 165 170 175

Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu Thr Val Leu 180 185 190

Ser Lys Phe Pro Ser Ser Asp Val Pro Ile Lys Phe Asp Lys Ile His 195 200 205

Ile Thr Val Phe Ser Arg Asn Val Gln Val Ser Leu Val Lys Asn Gly 210 215 220

Val Lys Ile Leu His Thr Arg Asp Ala Tyr Val Ser Ser Glu Asp Gln 225 230 235 240

Ala Ser Gly Ser Ile Val Leu Gln Leu Lys Leu Gly Asp Glu Met Trp 245 250 255

Cys Val Ile His Arg Val Ala Lys Cys Leu Ser Ile Cys Asp Pro Phe 260 265 270

Thr Val Ala Ser Cys Val Arg Ser Arg 275 280

<210> 218

<211> 27

<212> PRT

<213> Homo sapiens

<400> 218

Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly
1 5 10 15

Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro 20 25

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<210> 219
<211>
      27
<212> PRT
<213> Homo sapiens
<400> 219
Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
                                    10
Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala
<210> 220
<211> 29
<212> PRT
<213> Homo sapiens
<400> 220
Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly
Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu
<210> 221
<211> 29
<212> PRT
<213> Homo sapiens
<400> 221
Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
                                   10
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Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu
<210> 222
<211> 29
<212> PRT
<213> Homo sapiens
<400> 222
Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly
                                   10
Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg Gly Glu
           20
<210> 223
<211> 27
<212> PRT
<213> Homo sapiens
<400> 223
Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
                                                       15
Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys
<210> 224
<211> 27
<212> PRT
<213> Homo sapiens
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<400> 224

Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly

5

10

15

Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro 20 25

<210> 225

<211> 27

<212> PRT

<213> Homo sapiens

<400> 225

Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly 1 5 10 15

Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro
20 25

<210> 226

<211> 29

<212> PRT

<213> Homo sapiens

<400> 226

Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly 1 5 10 15

<210> 227

<211> 27

<212> PRT

<213> Homo sapiens

<213> Homo sapiens

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<400> 227
Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly
                                    10
               5
Glu Pro Gly Val Arg Gly Ile Arg Gly Trp Lys
<210> 228
<211> 27
<212> PRT
<213> Homo sapiens
<400> 228
Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
               5
                                   10
Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg
           20
<210> 229
<211> 29
<212> PRT
<213> Homo sapiens
<400> 229
Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu
                               25
            20
<210> 230
<211> 29
<212> PRT
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<211> 22

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<400> 230
Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly
Val Arg Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu
<210> 231
<211> 20
<212> PRT
<213> Homo sapiens
<400> 231
Asp Gln Ala Ser Gly Ser Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
Met Trp Cys Val
<210> 232
<211> 27
<212> PRT
<213> Homo sapiens
<400> 232
Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly
Pro Gln Gly Glu Pro Gly Val Arg Gly Ile Arg
<210> 233
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<212> PRT
<213> Homo sapiens
<400> 233
Asp Gln Ala Ser Gly Ser Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
Met Trp Cys Val Ile His
            20
<210> 234
<211> 29
<212> PRT
<213> Homo sapiens
<400> 234
Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala
<210> 235
<211> 29
<212> PRT
<213> Homo sapiens
<400> 235
Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly
                                   10
                                                       15
Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro
            20
<210> 236
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```
<211> 27
<212> PRT
<213> Homo sapiens
<400> 236
Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
                                   10
Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys
<210> 237
<211> 27
<212> PRT
<213> Homo sapiens
<400> 237
Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly
                                   10
Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys
            20
<210> 238
<211> 27
<212> PRT
<213> Homo sapiens
<400> 238
Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly
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Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys

20

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<210> 239
<211>
       29
<212>
       PRT
<213> Homo sapiens
<400> 239
Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly
Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu
            20
<210> 240
<211>
       1026
<212>
       DNA
<213> Homo sapiens
<220>
<221>
       CDS
       (25)..(1026)
<222>
<223>
<400> 240
tcagttcagt ctgtcatctg aacc atg agg atc tgg tgg ctt ctg ctt gcc
                                                                       51
                           Met Arg Ile Trp Trp Leu Leu Leu Ala
                                                                       99
att gaa atc tgc aca ggg aac ata aac tca cag gac acc tgc agg caa
Ile Glu Ile Cys Thr Gly Asn Ile Asn Ser Gln Asp Thr Cys Arg Gln
10
                    15
ggg cac cct ggc atc cct ggg aac ccc ggt cac aat ggt ctg cct gga
                                                                      147
Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
                30
                                    35
                                                         40
                                                                      195
aga gat gga cga gac gga gcg aag ggt gac aaa ggc gat gca gga gaa
Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu
```

| | | | | agc Ser | | | | | | | | | | 243 |
|---|---|---|-------|-------------------|---|---|-----|-----|---|-----|---|---|---|-----|
| | _ | _ | _ | gat Asp | | | _ | - | _ | | | | | 291 |
| | | | | gga Gly 95 | | | | | | | | | | 339 |
| | | | | gag Glu | | | | | | | | | | 387 |
| | | | | aag Lys | | | | | | | | | | 435 |
| | | | | Gly 999 | | | | | | | | | | 483 |
| | | | | aag Lys | | | | | | | | | | 531 |
| | | | | cca Pro 175 | | | | | | | | | | 579 |
| | | | | gly aaa | | | | | | | | | | 627 |
| | | | | Gly 999 | | | Val | Leu | | Lys | | | | 675 |
| _ | | | | ttt Phe | _ | _ | | _ | | | | | | 723 |
| | | | | gly ggg | | | | | | | _ | | | 771 |
| | | | | atc Ile 255 | | | | | | | | | | 819 |
| _ | - | | | gta Val | | | _ | | | | - | _ | _ | 867 |

| agc tct gag gac cag gcc tct ggc ggc att gtc ctg cag ctg aag ctc Ser Ser Glu Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu 285 290 295 | 915 |
|---|------|
| ggg gat gag gtg tgg ctg cag gtg aca gga gga gag agg ttc aat ggc Gly Asp Glu Val Trp Leu Gln Val Thr Gly Gly Glu Arg Phe Asn Gly 300 305 310 | 963 |
| ttg ttt gct gat gag gac gat gac aca act ttc aca ggg ttc ctt ctg Leu Phe Ala Asp Glu Asp Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu 315 320 325 | 1011 |
| ttc agc agc ccg tga Phe Ser Ser Pro 330 | 1026 |
| <210> 241 | |
| <211> 333 | |
| <212> PRT | |
| <213> Homo sapiens | |
| <400> 241 | |
| Met Arg Ile Trp Trp Leu Leu Leu Ala Ile Glu Ile Cys Thr Gly Asn 1 5 10 15 | |
| Ile Asn Ser Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly 20 25 30 | |
| Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala 35 40 45 | |
| Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro 50 55 60 | |
| Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly 65 70 75 80 | |
| Lys Val Glu Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser 85 90 95 | |
| I | |

Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly 115 120 125

Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro 130 135 140

Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro 145 150 155 160

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly
165 170 175

Val Gln Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys
180 185 190

Ile Gly Glu Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu 195 200 205

Thr Val Leu Ser Lys Phe Pro Ser Ser Asp Arg Pro Ile Lys Phe Asp 210 215 220

Lys Ile Leu Tyr Asn Glu Phe Asn His Tyr Asp Thr Ala Ala Gly Lys 225 230 235 240

Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr His Ile Thr 245 250 255

Val Phe Ser Arg Asn Val Gln Val Ser Leu Val Lys Asn Gly Val Lys 260 265 270

Ile Leu His Thr Lys Asp Ala Tyr Met Ser Ser Glu Asp Gln Ala Ser 275 280 285

Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu Val Trp Leu Gln 290 295 300

Val Thr Gly Glu Glu Arg Phe Asn Gly Leu Phe Ala Asp Glu Asp Asp 305 310 315 320

Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser Ser Pro 325 330

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<210> 242
<211> 1002
<212> DNA
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<213> Homo sapiens

| <400> 242 atgaggatct | ggtggcttct | gcttgccatt | gaaatctgca | cagggaacat | aaactcacag | 60 |
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| gacacctgca | ggcaagggca | ccctggcatc | cctgggaacc | ccggtcacaa | tggtctgcct | 120 |
| ggaagagatg | gacgagacgg | agcgaagggt | gacaaaggcg | atgcaggaga | accaggacgt | 180 |
| cctggcagcc | cggggaagga | tgggacgagt | ggagagaagg | gagaacgagg | agcagatgga | 240 |
| aaagttgaag | caaaaggcat | caaaggtgat | caaggctcaa | gaggatcccc | aggaaaacat | 300 |
| ggccccaagg | ggcttgcagg | gcccatggga | gagaagggcc | tccgaggaga | gactgggcct | 360 |
| caggggcaga | aggggaataa | gggtgacgtg | ggtcccactg | gtcctgaggg | gccaaggggc | 420 |
| aacattgggc | ctttgggccc | aactggttta | ccgggcccca | tgggccctat | tggaaagcct | 480 |
| ggtcccaaag | gagaagctgg | acccacgggg | ccccagggtg | agccaggagt | ccagggaata | 540 |
| agaggctgga | aaggagatcg | aggagagaaa | gggaaaatcg | gtgagactct | agtcttgcca | 600 |
| aaaagtgctt | tcactgtggg | gctcacggtg | ctgagcaagt | ttccttcttc | agataggccc | 660 |
| attaaatttg | ataagatcct | gtataacgaa | ttcaaccatt | atgatacagc | agcggggaaa | 720 |
| ttcacgtgcc | acattgctgg | ggtctattac | ttcacctacc | acatcactgt | tttctccaga | 780 |
| aatgttcagg | tgtctttggt | caaaaatgga | gtaaaaatac | tgcacaccaa | agatgcttac | 840 |
| atgagctctg | aggaccaggc | ctctggcggc | attgtcctgc | agctgaagct | cggggatgag | 900 |
| gtgtggctgc | aggtgacagg | aggagagagg | ttcaatggct | tgtttgctga | tgaggacgat | 960 |
| gacacaactt | tcacagggtt | ccttctgttc | agcagcccgt | ga | | 1002 |
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<210> 243

<211> 314

<212> PRT

<213> Homo sapiens

<400> 243

Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly 1 5 10 15

His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp 20 25 30

Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly Lys Asp 35 40 45

Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly Lys Val Glu 50 55 60

Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys 65 70 75 80

His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg 85 90 95

Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly Asp Val Gly 100 105 110

Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro 115 120 125

Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys 130 135 140

Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly Val Gln Gly 145 150 155 160

Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys Ile Gly Glu 165 170 175

Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu Thr Val Leu 180 185 190

Ser Lys Phe Pro Ser Ser Asp Arg Pro Ile Lys Phe Asp Lys Ile Leu 195 200 205

Tyr Asn Glu Phe Asn His Tyr Asp Thr Ala Ala Gly Lys Phe Thr Cys 210 215 220

His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr His Ile Thr Val Phe Ser 225 230 235 240

Arg Asn Val Gln Val Ser Leu Val Lys Asn Gly Val Lys Ile Leu His
245 250 255

Thr Lys Asp Ala Tyr Met Ser Ser Glu Asp Gln Ala Ser Gly Gly Ile
260 265 270

Val Leu Gln Leu Lys Leu Gly Asp Glu Val Trp Leu Gln Val Thr Gly 275 280 285

Gly Glu Arg Phe Asn Gly Leu Phe Ala Asp Glu Asp Asp Asp Thr Thr 290 295 300

Phe Thr Gly Phe Leu Leu Phe Ser Ser Pro 305 310

<210> 244

<211> 36

<212> PRT

<213> Homo sapiens

<400> 244

Pro Ile Lys Phe Asp Lys Ile Leu Tyr Asn Glu Phe Asn His Tyr Asp 1 5 10 15

Thr Ala Ala Gly Lys Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe 20 25 30

Thr Tyr His Ile 35

<210> 245

<211> 22

<212> PRT

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Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
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Val Trp Leu Gln Val Thr
<210> 246
<211> 20
<212> PRT
<213> Homo sapiens
<400> 246
Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
Val Trp Leu Gln
           20
<210> 247
<211> 20
<212> PRT
<213> Homo sapiens
<400> 247
Phe Thr Cys His Ile Ala Gly Val Tyr Tyr Phe Thr Tyr His Ile Thr
Val Phe Ser Arg
           20
<210> 248
<211> 27
<212> PRT
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<213> Homo sapiens
<400> 248
Phe Pro Ser Ser Asp Arg Pro Ile Lys Phe Asp Lys Ile Leu Tyr Asn
                                                        15
                5
                                    10
Glu Phe Asn His Tyr Asp Thr Ala Ala Gly Lys
<210> 249
<211> 27
<212> PRT
<213> Homo sapiens
<400> 249
Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly
                                   10
Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro
           20
<210> 250
<211> 27
<212> PRT
<213> Homo sapiens
<400> 250
Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala
                                25
<210> 251
<211> 29
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<212> PRT
<213> Homo sapiens
<400> 251
Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly
                                   10
Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu
<210> 252
<211> 29
<212> PRT
<213> Homo sapiens
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Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu
                                25
            20
<210> 253
<211> 29
<212> PRT
<213> Homo sapiens
<400> 253
Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly
                                    10
                5
Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg Gly Glu
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Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys 20 25

<210> 255

<211> 27

<212> PRT

<213> Homo sapiens

<400> 255

Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly
1 5 10 15

Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro 20 25

<210> 256

<211> 27

<212> PRT

<213> Homo sapiens

<400> 256

Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly
1 5 10 15

Glu Pro Gly Val Gln Gly Ile Arg Gly Trp Lys

20 25

<210> 257

<211> 27

<212> PRT

<213> Homo sapiens

<400> 257

Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly 1 5 10 15

Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro 20 25

<210> 258

<211> 29

<212> PRT

<213> Homo sapiens

<400> 258

Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly 1 5 10 15

<210> 259

<211> 27

<212> PRT

<213> Homo sapiens

<400> 259

Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly 1 5 10 15

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Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg
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<211> 29
<212> PRT
<213> Homo sapiens
<400> 260
Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu
            20
<210> 261
<211> 29
<212> PRT
<213> Homo sapiens
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Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly
               5
Val Gln Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu
<210> 262
<211> 29
<212> PRT
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<400> 262

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Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala
<210> 263
<211> 29
<212> PRT
<213> Homo sapiens
<400> 263
Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly
    5
Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro
           20
<210> 264
<211> 11
<212> PRT
<213> Homo sapiens
<400> 264
Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe
<210> 265
<211> 27
<212> PRT
<213> Homo sapiens
<400> 265
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Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly
                5
                                    10
Pro Gln Gly Glu Pro Gly Val Gln Gly Ile Arg
<210> 266
<211> 10
<212> PRT
<213> Homo sapiens
<400> 266
Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser
               5
<210> 267
<211> 27
<212> PRT
<213> Homo sapiens
<400> 267
Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys
<210> 268
<211> 27
<212> PRT
<213> Homo sapiens
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<400> 268

Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly

5

10

15

Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys 20 25

<210> 269

<211> 27

<212> PRT

<213> Homo sapiens

<400> 269

Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly 1 5 10 15

Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys
20 25

<210> 270

<211> 29

<212> PRT

<213> Homo sapiens

<400> 270

Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly 1 5 10 15

Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu 20 25

<210> 271

<211> 945

<212> DNA

| <220: | > | | | | | | | | | | | | | | | | |
|------------------|------------------|------------------|-------------------|-------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|------------------|-------------------|-------------------|-----------------------|-------------------|-----|------------|
| <221: | > C | DS | | | | | | | | | | | | | | | |
| <222 | > (| 25). | . (94 | 5) | | | | | | | | | | | | | |
| <223: | > | | | | | | | | | | | | | | | | |
| <400: tcag | > 2 ttca | 71 gt c | tgtc: | atct | g aa | icc a M 1 | let <i>I</i> | igg a | itc t | gg trp T | rp I | ett o Leu I | tg c eu I | ett g Jeu <i>I</i> | gcc Ala | 5 | 1 |
| att g Ile G | gaa Glu | atc Ile | tgc Cys | aca Thr | 999 Gly 15 | aac Asn | ata Ile | aac Asn | tca Ser | cag Gln 20 | gac Asp | acc Thr | tgc Cys | agg Arg | caa Gln 25 | 9 | 9 |
| gly : | cac His | cct Pro | ggc Gly | atc Ile 30 | cct Pro | gly aaa | aac Asn | ccc Pro | ggt Gly 35 | cac His | aat Asn | ggt Gly | ctg Leu | cct Pro 40 | gga Gly | 14 | : 7 |
| aga Arg | gat Asp | gga Gly | cga Arg 45 | gac Asp | gga Gly | gcg Ala | aag Lys | ggt Gly 50 | gac Asp | aaa Lys | ggc Gly | gat Asp | gca Ala 55 | gga Gly | gaa Glu | 19 | 5 |
| cca Pro | gga Gly | cgt Arg 60 | cct Pro | ggc Gly | agc Ser | ccg Pro | 999 Gly 65 | aag Lys | gat Asp | gly aaa | acg Thr | agt Ser 70 | gga Gly | gag Glu | aag Lys | 24 | .3 |
| Gly | gaa Glu 75 | cga Arg | gga Gly | gca Ala | gat Asp | gga Gly 80 | aaa Lys | gtt Val | gaa Glu | gca Ala | aaa Lys 85 | ggc Gly | atc Ile | aaa Lys | ggt Gly | 29 | 1 |
| gat Asp 90 | caa Gln | ggc Gly | tca Ser | aga Arg | gga Gly 95 | tcc Ser | cca Pro | gga Gly | aaa Lys | cat His 100 | ggc Gly | ccc Pro | aag Lys | Gly 999 | ctt Leu 105 | 33 | :9 |
| gca Ala | gly aaa | ccc Pro | atg Met | gga Gly 110 | gag Glu | aag Lys | ggc Gly | ctc Leu | cga Arg 115 | gga Gly | gag Glu | act Thr | gly aaa | cct Pro 120 | cag Gln | 38 | 37 |
| Gly 333 | cag Gln | aag Lys | 999 Gly 125 | aat Asn | aag Lys | ggt Gly | gac Asp | gtg Val 130 | ggt Gly | ccc Pro | act Thr | ggt Gly | cct Pro 135 | gag Glu | glà aaa | 43 | 35 |
| cca Pro | agg Arg | ggc Gly | aac Asn | att Ile | Gly aaa | cct Pro | ttg Leu 145 | ggc Gly | cca Pro | act Thr | ggt Gly | tta Leu 150 | ccg Pro | ggc Gly | ccc Pro | 4.8 | 3 |

Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr
155

ggg ccc cag ggt gag cca gga gtc cag gga ata aga ggc tgg aaa gga
Gly Pro Gln Gly Glu Pro Gly Val Gln Gly Ile Arg Gly Trp Lys Gly

145

atg ggc cct att gga aag cct ggt ccc aaa gga gaa gct gga ccc acg

140

531

| 170 | 175 | 180 | 185 |
|---|---|---|-----------------------------|
| gat cga gga gag aaa Asp Arg Gly Glu Lys 190 | Gly Lys Ile Gly (| gag act cta gtc ttg c Glu Thr Leu Val Leu F 195 2 | ca aaa 627 Pro Lys 00 |
| agt gct ttc act gtg Ser Ala Phe Thr Val 205 | ggg ctc acg gtg c Gly Leu Thr Val I 210 | ctg agc aag ttt cct t Leu Ser Lys Phe Pro S 215 | ct tca 675 er Ser |
| gat agg ccc att aaa Asp Arg Pro Ile Lys 220 | ttt gat aag atc o Phe Asp Lys Ile F 225 | cac atc act gtt ttc t His Ile Thr Val Phe S 230 | cc aga 723 er Arg |
| aat gtt cag gtg tct Asn Val Gln Val Ser 235 | ttg gtc aaa aat g Leu Val Lys Asn G 240 | gga gta aaa ata ctg c Bly Val Lys Ile Leu H 245 | ac acc 771 is Thr |
| aaa gat gct tac atg Lys Asp Ala Tyr Met 250 | agc tct gag gac c Ser Ser Glu Asp G 255 | cag gcc tct ggc ggc a In Ala Ser Gly Gly I 260 | tt gtc 819 le Val 265 |
| ctg cag ctg aag ctc Leu Gln Leu Lys Leu 270 | Gly Asp Glu Val T | gg ctg cag gtg aca g Trp Leu Gln Val Thr G 175 2 | ga gga 867 ly Gly 80 |
| | | gag gac gat gac aca a lu Asp Asp Asp Thr T 295 | |
| aca ggg ttc ctt ctg Thr Gly Phe Leu Leu 300 | | ga | 945 |
| <210> 272 | | | |
| <211> 306 | | | |
| <212> PRT | | | |
| <213> Homo sapiens | | | |
| <400> 272 | | | |
| Met Arg Ile Trp Trp 1 5 | | le Glu Ile Cys Thr G .0 1 | ly Asn 5 |
| Ile Asn Ser Gln Asp 20 | Thr Cys Arg Gln G | Bly His Pro Gly Ile P 30 | ro Gly |
| Asn Pro Gly His Asn 35 | Gly Leu Pro Gly F | arg Asp Gly Arg Asp G 45 | ly Ala |

Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro 50 55 60

Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly 65 70 75 80

Lys Val Glu Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser 85 90 95

Pro Gly Lys His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys
100 105 110

Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly 115 120 125

Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro 130 135 140

Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro 145 150 155 160

Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly 165 170 175

Val Gln Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys
180 185 190

Ile Gly Glu Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu 195 200 205

Thr Val Leu Ser Lys Phe Pro Ser Ser Asp Arg Pro Ile Lys Phe Asp 210 215 220

Lys Ile His Ile Thr Val Phe Ser Arg Asn Val Gln Val Ser Leu Val 225 230 235 240

Lys Asn Gly Val Lys Ile Leu His Thr Lys Asp Ala Tyr Met Ser Ser 245 250 255

Glu Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp 260 265 270

Glu Val Trp Leu Gln Val Thr Gly Gly Glu Arg Phe Asn Gly Leu Phe 275 280 285

Ala Asp Glu Asp Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser 290 295 300

Ser Pro 305

<210> 273

<211> 921

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<210> 274
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<211> 287

<212> PRT

<213> Homo sapiens

<400> 274

Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly 1 5 10 15

His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp 20 25 30

Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly Lys Asp 35 40 45

Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp Gly Lys Val Glu 50 55 60

Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys 65 70 75 80

His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg 85 90 95

Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly Asp Val Gly
100 105 110

Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro 115 120 125

Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys 130 135 140

Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly Val Gln Gly 145 150 155 160

Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys Ile Gly Glu 165 170 175

Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu Thr Val Leu

180 185 190

Ser Lys Phe Pro Ser Ser Asp Arg Pro Ile Lys Phe Asp Lys Ile His
195 200 205

Ile Thr Val Phe Ser Arg Asn Val Gln Val Ser Leu Val Lys Asn Gly 210 215 220

Val Lys Ile Leu His Thr Lys Asp Ala Tyr Met Ser Ser Glu Asp Gln 225 230 235 240

Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu Val Trp
245 250 255

Leu Gln Val Thr Gly Gly Glu Arg Phe Asn Gly Leu Phe Ala Asp Glu 260 265 270

Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser Ser Pro 275 280 285

<210> 275

<211> 22

<212> PRT

<213> Homo sapiens

<400> 275

Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu 1 5 10 15

Val Trp Leu Gln Val Thr

<210> 276

<211> 20

<212> PRT

<212> PRT

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Asp Gln Ala Ser Gly Gly Ile Val Leu Gln Leu Lys Leu Gly Asp Glu
                                   10
Val Trp Leu Gln
<210> 277
<211> 27
<212> PRT
<213> Homo sapiens
<400> 277
Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly
                                   10
Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro
<210> 278
<211> 27
<212> PRT
<213> Homo sapiens
<400> 278
Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala
<210> 279
<211> 29
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<211> 27

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<400> 279
Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly
Arg Pro Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu
<210> 280
<211> 29
<212> PRT
<213> Homo sapiens
<400> 280
Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly
                                                        15
                5
Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu
<210> 281
<211> 29
<212> PRT
<213> Homo sapiens
<400> 281
Gly Asp Gln Gly Ser Arg Gly Ser Pro Gly Lys His Gly Pro Lys Gly
                                    10
               5
Leu Ala Gly Pro Met Gly Glu Lys Gly Leu Arg Gly Glu
            20
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<212> PRT
<213> Homo sapiens
<400> 282
Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys
<210> 283
<211> 27
<212> PRT
<213> Homo sapiens
<400> 283
Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly
                                   10
Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro
<210> 284
<211> 27
<212> PRT
<213> Homo sapiens
<400> 284
Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly
Glu Pro Gly Val Gln Gly Ile Arg Gly Trp Lys
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20

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<211> 27
<212> PRT
<213> Homo sapiens
<400> 285
Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly
                                    10
Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro
<210> 286
<211> 29
<212> PRT
<213> Homo sapiens
<400> 286
Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly Leu Pro Gly
                                    10
Arg Asp Gly Arg Asp Gly Ala Lys Gly Asp Lys Gly Asp
                                25
            20
<210> 287
<211> 27
<212> PRT
<213> Homo sapiens
<400> 287
Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
               5
                                    10
Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg
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<211> 29
<212> PRT
<213> Homo sapiens
<400> 288
Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu
           20
<210> 289
<211> 29
<212> PRT
<213> Homo sapiens
<400> 289
Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly
               5
1
Val Gln Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu
<210> 290
<211> 29
<212> PRT
<213> Homo sapiens
<400> 290
Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser Pro Gly
                                   10
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Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala
<210> 291
<211> 29
<212> PRT
<213> Homo sapiens
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Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly
                                   10
               5
Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro Gly Pro
<210> 292
<211> 11
<212> PRT
<213> Homo sapiens
<400> 292
Asp Asp Thr Thr Phe Thr Gly Phe Leu Leu Phe
<210> 293
<211> 27
<212> PRT
<213> Homo sapiens
<400> 293
Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly
                                   10
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Pro Gln Gly Glu Pro Gly Val Gln Gly Ile Arg
           20
<210> 294
<211> 10
<212> PRT
<213> Homo sapiens
<400> 294
Thr Thr Phe Thr Gly Phe Leu Leu Phe Ser
       5
<210> 295
<211> 27
<212> PRT
<213> Homo sapiens
<400> 295
Gly Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly
               5
Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys
           20
<210> 296
<211> 27
<212> PRT
<213> Homo sapiens
<400> 296
Gly Ser Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly
                                   10
Ala Asp Gly Lys Val Glu Ala Lys Gly Ile Lys
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20 25

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<211> 27

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Cys Arg Gln Gly His Pro Gly Ile Pro Gly Asn Pro Gly His Asn Gly 1 5 10 15

Leu Pro Gly Arg Asp Gly Arg Asp Gly Ala Lys 20 25

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<211> 29

<212> PRT

<213> Homo sapiens

<400> 298

Gly Pro Arg Gly Asn Ile Gly Pro Leu Gly Pro Thr Gly Leu Pro Gly
1 5 10 15

Pro Met Gly Pro Ile Gly Lys Pro Gly Pro Lys Gly Glu 20 25

<210> 299

<211> 245

<212> PRT

<213> Homo sapiens

<400> 299

Ala Ser Phe Leu Leu Gln Met Cys Pro Gly Pro Val Gln Ser Leu Ser 1 5 10 15

| Ser | Glu | Pro | Gly | Ser | Gly | Gly | Phe | Cys | Leu | Pro | Leu | Lys | Ser | Ala | Glr |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | 20 | | | | | 25 | | | | | 30 | | |

- Gly Thr Thr Pro Gln Asp Thr Cys Arg Gln Gly His Pro Gly Ile Pro 35 40 45
- Gly Asn Pro Gly His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly 50 55 60
- Ala Lys Gly Asp Lys Gly Asp Ala Gly Glu Pro Gly Arg Pro Gly Ser 65 70 75 80
- Pro Gly Lys Asp Gly Thr Ser Gly Glu Lys Gly Glu Arg Gly Ala Asp 85 90 95
- Gly Lys Val Glu Ala Lys Gly Ile Lys Gly Asp Gln Gly Ser Gly Ser 100 105 110
- Pro Gly Lys His Gly Pro Lys Gly Leu Ala Gly Pro Met Gly Glu Lys
 115 120 125
- Gly Leu Arg Gly Glu Thr Gly Pro Gln Gly Gln Lys Gly Asn Lys Gly 130 $$135\$
- Asp Val Gly Pro Thr Gly Pro Glu Gly Pro Arg Gly Asn Ile Gly Pro 145 150 155 160
- Leu Gly Pro Thr Gly Leu Pro Gly Pro Met Gly Pro Ile Gly Lys Pro 165 170 175
- Gly Pro Lys Gly Glu Ala Gly Pro Thr Gly Pro Gln Gly Glu Pro Gly 180 185 190
- Val Arg Gly Ile Arg Gly Trp Lys Gly Asp Arg Gly Glu Lys Gly Lys 195 200 205
- Ile Gly Glu Thr Leu Val Leu Pro Lys Ser Ala Phe Thr Val Gly Leu 210 215 220
- Thr Val Leu Ser Lys Phe Pro Ser Ser Asp Val Pro Ile Lys Phe Asp 225 230 235 240

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       300
<211>
       422
<212> DNA
<213> Homo sapiens
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caatttttta tattcaaatc tacgacattg aattagggct tctatatata tgatactttg
                                                                     120
gtgtactgtg atcttgctgc ttttatccat atgtcagctt tggttcttgt gagtttacct
                                                                     180
gcttattatg atacttggag tccattcata gtgtggggaa gaatgatttt tgccctgcag
                                                                     240
gagaaggtct aattgaaata atgctgcttg tccccaaaga aattgtttgc cttgtactct
                                                                     300
tgttaacctt agagctagac ctgggaatga ttcaacttca agccttaacc tggaattttc
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                                                                     420
tggatttgag ggaattccca agcctatgat ctttttcaca ttttctttt cttatatgaa
at
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| aatatttgtc tgcctggt | ga gagcccagcg ta | gggctgtg ct | tgtccgtag atac | tcaata 120 | | | | | | |
| ctgattaatg gatggccg | tg catgtctgtg tg | ggagtegt gt | gtgcttagga tctgctcagc 18 | | | | | | | |
| tctccgaaag caacagaa | atg gtg tgg gga Met Val Trp Gly 1 | aga aga aa Arg Arg Ly 5 | aa tca cag gat ys Ser Gln Asp 10 | tgt 231 Cys | | | | | | |
| gat cca acc atg atc Asp Pro Thr Met Ile 15 | acg gct ttc tgg Thr Ala Phe Trp 20 | g att gga ct o Ile Gly Le | tt cat ctt ctg eu His Leu Leu 25 | gag 279 Glu | | | | | | |
| ggt cca caa ggt cca Gly Pro Gln Gly Pro 30 | gtg ctg gca gca Val Leu Ala Ala 35 | aac ctc ac Asn Leu Th | cc att ttg tcc nr Ile Leu Ser 40 | tcc 327 Ser | | | | | | |
| aaa agg aag gtg act Lys Arg Lys Val Thr 45 | | | rg Gly Pro Arg | | | | | | | |
| acc ttc aaa att ctg Thr Phe Lys Ile Leu 60 | | | | | | | | | | |
| agc cgg ctg gtg ggc Ser Arg Leu Val Gly 80 | agc agg agg cgc Ser Arg Arg Arg | ctg atc gc Leu Ile Al 85 | cc gcc ggg gcg La Ala Gly Ala 90 | ctg 471 Leu | | | | | | |
| ggg gtg gtg atg gtg Gly Val Val Met Val 95 | ctg ctg ctg gtg Leu Leu Leu Val 100 | . Ile Leu Il | te eeg gtg etg Le Pro Val Leu 105 | atg 519 Met | | | | | | |
| ctg ggc acc tgc cgc Leu Gly Thr Cys Arg 110 | | | | | | | | | | |
| ccc agc acc gct gcc Pro Ser Thr Ala Ala 125 | acg ccc gac cgc Thr Pro Asp Arg 130 | ggc ctc ato Gly Leu Me 13 | et Gln Ser Leu | ccc 615 Pro | | | | | | |
| acc ttc atc cag ggc Thr Phe Ile Gln Gly 140 | ccc aaa ggc gag Pro Lys Gly Glu 145 | g gcc ggc ag L Ala Gly Ar 150 | gg ccc ggg aag cg Pro Gly Lys | gcg 663 Ala 155 | | | | | | |
| ggt ccg cgc ggg ccc Gly Pro Arg Gly Pro 160 | Pro Gly Glu Pro | ggg cca cc Gly Pro Pro 165 | cc ggc ccc atg co Gly Pro Met 170 | ggg 711 Gly | | | | | | |

| ccc cc Pro Pi | cg ggc ro Gly | gag Glu 175 | aag Lys | ggc Gly | gag Glu | ccg Pro | ggc Gly 180 | cgc Arg | caa Gln | ggc Gly | ctg Leu | ccg Pro 185 | ggc | ccg Pro | 759 |
|-------------------------|-------------------------|-------------------|------------|-------------------|------------|------------|-------------------|------------|-------------------|------------|------------|-------------------|------------|-------------------|------|
| | gg gcg ly Ala 190 | | | | | | | | | | | | | | 807 |
| Tyr Se | gc acg er Thr 05 | | | | | | | | | | | | | | 855 |
| cat ga His Gl 220 | aa ggc lu Gly | tac Tyr | gag Glu | gtg Val 225 | ctc Leu | aag Lys | ttc Phe | gac Asp | gac Asp 230 | gtg Val | gtc Val | acc Thr | aac Asn | ctc Leu 235 | 903 |
| | ac cac sn His | | | | | | | | | | | | | | 951 |
| ggc at Gly Il | | | | | | | | | | | | | | | 999 |
| acc ag Thr Se | gc atg er Met 270 | | | | | | | | | | | | | | 1047 |
| gca at Ala Il 28 | le Āla | | | | | | | | | | | | | | 1095 |
| gtg gt Val Va 300 | | | | | | | | | | | | | | | 1143 |
| ggc gg | | | | | | | | | | | | | | | 1191 |
| gga tt Gly Ph | | | | | | tga | taat | :gcag | jaa a | ictaa | ıgctt | a tt | atto | tgag | 1245 |
| tttgaa | acact 9 | ggatt | cgta | it gg | gctaa | cgtc | agt | gaat | caa | ggat | ccca | gg g | gate | gccaat | 1305 |
| ggcagg | ggcac (| ctcas | ıttgt | g ta | tate | rtggg | g gaa | atca | aat | gcta | cctg | ac t | caca | ıtctgt | 1365 |
| atcact | caga a | aacat | tate | jt aa | aaaa | tato | aaa | ıgcaa | ıgat | aago | agat | gt g | ıtgat | ccact | 1425 |
| accgcc | caaag (| caaat | acto | c tt | atcg | rttag | ı tgt | ccat | gtg | aatg | aagt | .cc t | atat | agatc | 1485 |
| acaaat | tțttt a | ataga | caaa | at ct | aaga | catt | gaa | ıttat | ttc | ttct | atat | at a | tgat | acttt | 1545 |
| ggtgta | actgt (| gatct | tgct | g ct | ttta | .tcca | tat | gtca | gct | ttgg | ttct | tg t | gagt | ttacc | 1605 |
| tgctta | attat 9 | gatac | ttgg | ga gt | ccat | tcat | agt: | gtgg | ıgga | agaa | tgat | tt t | tgcc | ctgca | 1665 |

| ggagaaggtc | taattgaaat | aatgctgctt | gtccccaaag | aaattgtttg | ccttgtactc | 1725 |
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| ttgttaacct | tagagctaga | cctgggaatg | attcaacttc | aagccttaac | ctggaatttt | 1785 |
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| aat | | | | | | 1848 |

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<212> PRT

<213> Homo sapiens

<400> 302

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Thr Ala Phe Trp Ile Gly Leu His Leu Leu Glu Gly Pro Gln Gly Pro 20 25 30

Val Leu Ala Ala Asn Leu Thr Ile Leu Ser Ser Lys Arg Lys Val Thr 35 40 45

Phe Lys Lys Gln Ser Arg Arg Gly Pro Arg Pro Thr Phe Lys Ile Leu 50 55 60

Ser Lys Ser Arg Gln Glu Asp Arg Pro Ala Leu Ser Arg Leu Val Gly 65 70 75 80

Ser Arg Arg Leu Ile Ala Ala Gly Ala Leu Gly Val Val Met Val 85 90 95

Leu Leu Val Ile Leu Ile Pro Val Leu Met Leu Gly Thr Cys Arg
100 105 110

Met Val Cys Asp Pro Tyr Gly Gly Thr Lys Ala Pro Ser Thr Ala Ala 115 120 125

Thr Pro Asp Arg Gly Leu Met Gln Ser Leu Pro Thr Phe Ile Gln Gly 130 135 140

Pro Lys Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro 145 150 155 160

Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys 165 170 175

Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro Gly 180 185 190

Leu Asn Ala Ala Gly Ala Ile Ser Ala Ala Thr Tyr Ser Thr Gly Pro
195 200 205

Lys Ile Ala Phe Tyr Ala Gly Leu Lys Arg Gln His Glu Gly Tyr Glu 210 215 220

Val Leu Lys Phe Asp Asp Val Val Thr Asn Leu Gly Asn His Tyr Asp 225 230 235 240

Pro Thr Thr Gly Lys Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe 245 250 255

Thr Tyr His Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala 260 265 270

Asp Leu Cys Lys Asn Asn Gln Val Arg Ala Ser Ala Ile Ala Gln Asp 275 280 285

Ala Asp Gln Asn Tyr Asp Tyr Ala Ser Asn Ser Val Val Leu His Leu 290 295 300

Glu Pro Gly Asp Glu Val Tyr Ile Lys Leu Asp Gly Gly Lys Ala His 305 310 315 320

Gly Gly Asn Asn Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile Ile Tyr 325 330 335

Ala Asp

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<211> 1017

<212> DNA

<213> Homo sapiens

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| attggact | tc | atcttctgga | gggtccacaa | ggtccagtgc | tggcagcaaa | cctcaccatt | 120 |
| ttgtcctc | ca | aaaggaaggt | gacttttaag | aagcaatcca | gaagaggtcc | ccgcccaacc | 180 |
| ttcaaaat | tc | tgtccaaaag | cagacaagag | gatcgccccg | cgctgagccg | gctggtgggc | 240 |
| agcaggag | gc | gcctgatcgc | cgccggggcg | ctgggggtgg | tgatggtgct | gctgctggtg | 300 |
| atcctcat | CC | cggtgctgat | gctgggcacc | tgccgcatgg | tctgcgaccc | ctacgggggc | 360 |
| accaaggc | gc | ccagcaccgc | tgccacgccc | gaccgcggcc | tcatgcagtc | cctgcccacc | 420 |
| ttcatcca | gg | gccccaaagg | cgaggccggc | aggcccggga | aggcgggtcc | gcgcgggccc | 480 |
| cccggaga | gc | ccgggccacc | cggccccatg | gggcccccgg | gcgagaaggg | cgagccgggc | 540 |
| cgccaagg | cc | tgccgggccc | gcccggggcg | cccggcctga | acgcggccgg | ggccatcagc | 600 |
| gccgccac | ct | acagcacggg | gcccaagatc | gccttctacg | ccggcctcaa | gcggcagcat | 660 |
| gaaggcta | cg | aggtgctcaa | gttcgacgac | gtggtcacca | acctcggaaa | ccactacgac | 720 |
| cccaccac | cg | gcaagttcac | ctgctccatc | ccgggcatct | acttcttcac | ctaccacgtc | 780 |
| ctgatgcg | cg | gaggggacgg | caccagcatg | tgggctgatc | tctgcaaaaa | caaccaggtg | 840 |
| cgtgctag | tg | caattgccca | agatgctgat | cagaattacg | actatgccag | taacagtgtg | 900 |
| gttcttca | tt | tggagccggg | agatgaagtc | tatatcaaat | tagatggcgg | gaaagcccat | 960 |
| ggaggaaa | ca | acaacaaata | cagcacgttt | tctggattta | ttatttatgc | tgactga | 1017 |

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<211> 36

<212> PRT

<213> Homo sapiens

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Val Leu Lys Phe Asp Asp Val Val Thr Asn Leu Gly Asn His Tyr Asp 1 5 10 15

Pro Thr Thr Gly Lys Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe Thr Tyr His Val 35 <210> 305 <211> 20 <212> PRT <213> Homo sapiens <400> 305 Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe Thr Tyr His Val Leu 5 Met Arg Gly Gly 20 <210> 306 <211> 22 <212> PRT <213> Homo sapiens <400> 306 Asp Tyr Ala Ser Asn Ser Val Val Leu His Leu Glu Pro Gly Asp Glu 10 Val Tyr Ile Lys Leu Asp 20

<210> 307 <211> 27 <212> PRT

<212> PRT

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Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro
<210> 308
<211> 20
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<213> Homo sapiens
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Asp Tyr Ala Ser Asn Ser Val Val Leu His Leu Glu Pro Gly Asp Glu
                                   10
Val Tyr Ile Lys
           20
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<211> 27
<212> PRT
<213> Homo sapiens
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Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly
                                   10
Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro
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<210> ,310
<211> 27
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Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
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Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys
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<210> 311
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Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly
Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro
<210> 312
<211> 29
<212> PRT
<213> Homo sapiens
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Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
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Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu
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Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly
Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro
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<210> 314
<211> 27
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<213> Homo sapiens
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Gln His Glu Gly Tyr Glu Val Leu Lys Phe Asp Asp Val Val Thr Asn
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Leu Gly Asn His Tyr Asp Pro Thr Thr Gly Lys
<210> 315
<211> 27
<212> PRT
<213> Homo sapiens
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Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln Gly
                                    10
Leu Pro Gly Pro Pro Gly Ala Pro Gly Leu Asn
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<211> 27
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<213> Homo sapiens
<400> 316
Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly
                                    10
Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln
            20
<210> 317
<211> 29
<212> PRT
<213> Homo sapiens
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Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly
Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu
<210> 318
<211> 29
<212> PRT
<213> Homo sapiens
<400> 318
Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly
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<212> PRT

<213> Homo sapiens

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Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro Gly Leu
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<213> Homo sapiens
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Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro
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Gly Ala Pro Gly Leu Asn Ala Ala Gly Ala Ile Ser
<210> 320
<211> 27
<212> PRT
<213> Homo sapiens
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Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly
                                   10
Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro
            20
<210> 321
<211> 29
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Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly
Pro Pro Gly Ala Pro Gly Leu Asn Ala Ala Gly Ala Ile
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                                                                      120
caqqaqqqqc ctqatcqccq ccqqqqqqct gggggtggtg atg gtg ctg ctg
                                                                      175
                                            Met Val Leu Leu Leu
gtq atc ctc atc ccq qtq ctq atq ctq ggc acc tgc cgc atg gtc tgc
                                                                      223
Val Ile Leu Ile Pro Val Leu Met Leu Gly Thr Cys Arg Met Val Cys
                                    15
                10
                                                                      271
gad ded tad ggg ggd add aag gdg ded agd add gdt gdd adg ddd gad
Asp Pro Tyr Gly Gly Thr Lys Ala Pro Ser Thr Ala Ala Thr Pro Asp
            25
                                                    35
ege gge ete atg eag tee etg eee ace tte ate eag gge eee aaa gge
                                                                      319
Arg Gly Leu Met Gln Ser Leu Pro Thr Phe Ile Gln Gly Pro Lys Gly
                            45
                                                50
        40
gag geç ggc agg ccc ggg aag gcg ggt ccg cgc ggg ccc ccc gga gag
                                                                      367
Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu
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415

60

ccc ggg cca ccc ggc ccc atg ggg ccc ccg ggc gag aag ggc gag ccg

| Pro 70 | Gly | Pro | Pro | Gly | Pro 75 | Met | Gly | Pro | Pro | Gly 80 | Glu | Lys | Gly | Glu | Pro 85 | |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------|------|
| ggc | cgc Arg | caa Gln | ggc Gly | ctg Leu 90 | ccg Pro | ggc Gly | ccg Pro | ccc Pro | 999 Gly 95 | gcg Ala | ccc Pro | ggc Gly | ctg Leu | aac Asn 100 | gcg Ala | 463 |
| gcc Ala | gly ggg | gcc Ala | atc Ile 105 | agc Ser | gcc Ala | gcc Ala | acc Thr | tac Tyr 110 | agc Ser | acg Thr | Gly ggg | ccc Pro | aag Lys 115 | atc Ile | gcc Ala | 511 |
| ttc Phe | tac Tyr | gcc Ala 120 | ggc Gly | ctc Leu | aag Lys | cgg Arg | cag Gln 125 | cat His | gaa Glu | ggc Gly | tac Tyr | gag Glu 130 | gtg Val | ctc Leu | aag Lys | 559 |
| ttc Phe | gac Asp 135 | gac Asp | gtg Val | gtc Val | acc Thr | aac Asn 140 | ctc Leu | gga Gly | aac Asn | cac His | tac Tyr 145 | gac Asp | ccc Pro | acc Thr | acc Thr | 607 |
| | aag Lys | | | | | | | | | | | | | | | 655 |
| gtc Val | ctg Leu | atg Met | cgc Arg | gga Gly 170 | gly aaa | gac Asp | ggc Gly | acc Thr | agc Ser 175 | atg Met | tgg Trp | gct Ala | gat Asp | ctc Leu 180 | tgc Cys | 703 |
| aaa Lys | aac Asn | aac Asn | cag Gln 185 | gtg Val | cgt Arg | gct Ala | agt Ser | gca Ala 190 | att Ile | gcc Ala | caa Gln | gat Asp | gct Ala 195 | gat Asp | cag Gln | 751 |
| aat Asn | tac Tyr | gac Asp 200 | tat Tyr | gcc Ala | agt Ser | aac Asn | agt Ser 205 | gtg Val | gtt Val | ctt Leu | cat His | ttg Leu 210 | gag Glu | ccg Pro | gga Gly | 799 |
| gat Asp | gaa Glu 215 | gtc Val | tat Tyr | atc Ile | aaa Lys | tta Leu 220 | gat Asp | ggc Gly | Gly 333 | aaa Lys | gcc Ala 225 | cat His | gga Gly | gga Gly | aac Asn | 847 |
| aac Asn 230 | aac Asn | aaa Lys | tac Tyr | agc Ser | acg Thr 235 | ttt Phe | tct Ser | gga Gly | ttt Phe | att Ile 240 | att Ile | tat Tyr | gct Ala | gac Asp | tga | 895 |
| taa | tgcag | gaa a | actaa | agctt | ta tt | tatto | etgas | g ttt | gaad | cact | ggat | tcgt | tat <u>c</u> | ggcta | acgtc | 955 |
| agt | gaato | caa 🤉 | ggato | ccaç | gg gg | gatgo | ccaat | ggd | caggg | gcac | ctca | gttg | gtg t | atat | gtggg | 1015 |
| gaa | atcaa | aat 🤉 | gctad | cctga | ac to | cacat | ctgt | ato | cacto | caga | aaca | ttat | gt a | aaaa | atatc | 1075 |
| aaa | gcaag | gat a | aagca | agato | gt gt | gato | ccact | aco | egcca | aag | caaa | tact | cc t | tato | gttag | 1135 |
| tgt | ccat | gtg a | aatga | aagto | cc ta | atata | agato | c aca | aaatt | ttt | atag | gacaa | aat o | ctaac | gacatt | 1195 |
| gaa | ttati | ttc 1 | ttcta | atata | at at | gata | actt | ggt ggt | gtad | ctgt | gato | ttgo | ctg o | tttt | atcca | 1255 |
| tat | gtcag | gct 1 | ttggt | tcti | g to | gagtt | taco | tgo | cttat | tat | gata | actto | gga g | gtcca | ittcat | 1315 |

agtgtggga agaatgattt ttgccctgca ggagaaggtc taattgaaat aatgctgctt 1375
gtccccaaag aaattgtttg ccttgtactc ttgttaacct tagagctaga cctgggaatg 1435
attcaacttc aagccttaac ctggaatttt ctggatttga gggaattccc aagcctatga 1495
tctttttcac attttcttt tcttatatga aat 1528

<210> 323

<211> 244

<212> PRT

<213> Homo sapiens

<400> 323

Met Val Leu Leu Leu Val Ile Leu Ile Pro Val Leu Met Leu Gly Thr 1 5 10 15

Cys Arg Met Val Cys Asp Pro Tyr Gly Gly Thr Lys Ala Pro Ser Thr 20 25 30

Ala Ala Thr Pro Asp Arg Gly Leu Met Gln Ser Leu Pro Thr Phe Ile 35 40 45

Gln Gly Pro Lys Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg 50 55 60

Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly 65 70 75 80

Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala 85 90 95

Pro Gly Leu Asn Ala Ala Gly Ala Ile Ser Ala Ala Thr Tyr Ser Thr
100 105 110

Gly Pro Lys Ile Ala Phe Tyr Ala Gly Leu Lys Arg Gln His Glu Gly
115 120 125

Tyr Glu Val Leu Lys Phe Asp Asp Val Val Thr Asn Leu Gly Asn His 130 135 140 Tyr Asp Pro Thr Thr Gly Lys Phe Thr Cys Ser Ile Pro Gly Ile Tyr 145 150 155 160

Phe Phe Thr Tyr His Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met 165 170 175

Trp Ala Asp Leu Cys Lys Asn Asn Gln Val Arg Ala Ser Ala Ile Ala 180 185 190

Gln Asp Ala Asp Gln Asn Tyr Asp Tyr Ala Ser Asn Ser Val Val Leu 195 200 205

His Leu Glu Pro Gly Asp Glu Val Tyr Ile Lys Leu Asp Gly Gly Lys 210 215 220

Ala His Gly Gly Asn Asn Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile 225 230 235 240

Ile Tyr Ala Asp

<210> 324

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Cys Arg Met

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Val Cys Asp Pro Tyr Gly Gly Thr Lys Ala Pro Ser Thr Ala Ala Thr 1 5 10 15

Pro Asp Arg Gly Leu Met Gln Ser Leu Pro Thr Phe Ile Gln Gly Pro $20 \\ 25 \\ 30$

Lys Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro $35 \hspace{1cm} 40 \hspace{1cm} 45$

Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly
50 55 60

Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro Gly Leu 65 70 75 80

Asn Ala Ala Gly Ala Ile Ser Ala Ala Thr Tyr Ser Thr Gly Pro Lys 85 90 95

Ile Ala Phe Tyr Ala Gly Leu Lys Arg Gln His Glu Gly Tyr Glu Val

Leu Lys Phe Asp Asp Val Val Thr Asn Leu Gly Asn His Tyr Asp Pro 115 120 125

Thr Thr Gly Lys Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe Thr 130 135 140

Tyr His Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala Asp 145 150 155 160

Leu Cys Lys Asn Asn Gln Val Arg Ala Ser Ala Ile Ala Gln Asp Ala 165 170 175

Asp Gln Asn Tyr Asp Tyr Ala Ser Asn Ser Val Val Leu His Leu Glu 180 185 190

Pro Gly Asp Glu Val Tyr Ile Lys Leu Asp Gly Gly Lys Ala His Gly 195 200 205

Gly Asn Asn Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile Ile Tyr Ala 210 215 220

Asp 225

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15

Pro Thr Thr Gly Lys Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe 20 25 30

Thr Tyr His Val 35

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Phe Thr Cys Ser Ile Pro Gly Ile Tyr Phe Phe Thr Tyr His Val Leu 1 5 10 15

Met Arg Gly Gly 20

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Val Tyr Ile Lys Leu Asp 20

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Val Tyr Ile Lys
          20
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Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro
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Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys
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Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly
Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro
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Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
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                                    10
                                                       15
Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu
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Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly
Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro
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Gln His Glu Gly Tyr Glu Val Leu Lys Phe Asp Asp Val Val Thr Asn
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Leu Gly Asn His Tyr Asp Pro Thr Thr Gly Lys
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Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln 20 25

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Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu 20 25

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Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly 1 5 10 15

Arg Gln Gly Leu Pro Gly Pro Pro Gly Ala Pro Gly Leu <210> 342 <211> 44 <212> PRT <213> Homo sapiens <400> 342 Pro Arg Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Glu Lys Gly Glu Pro Gly Arg Gln Gly Leu Pro Gly Pro Pro 25 20 Gly Ala Pro Gly Leu Asn Ala Ala Gly Ala Ile Ser <210> 343 <211> 27 <212> PRT <213> Homo sapiens <400> 343 Gly Glu Ala Gly Arg Pro Gly Lys Ala Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Pro Pro Gly Pro Met Gly Pro Pro 20 <210> 344

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ggg acc gca gtt cct cct gct cca cag gtt ctg agg acg tgg aga ttt
                                                                       96
Gly Thr Ala Val Pro Pro Ala Pro Gln Val Leu Arg Thr Trp Arg Phe
            20
                                                                      144
ggc act gag cgg gga tct gtg tgc tcc tct gtt gag ggg gag acc aac
Gly Thr Glu Arg Gly Ser Val Cys Ser Ser Val Glu Gly Glu Thr Asn
                            40
        35
tgt ttc ttc gaa aaa gcc cct tta tct aag ctc acc ccg ggc cca ttt
                                                                      192
Cys Phe Phe Glu Lys Ala Pro Leu Ser Lys Leu Thr Pro Gly Pro Phe
    50
                                                                      240
age ace aca age gae agt the tet gaa the tet gat gag tee age att
Ser Thr Thr Ser Asp Ser Phe Ser Glu Phe Ser Asp Glu Ser Ser Ile
                    70
65
                                                                      288
tct cat gct tca gtc cgt gat ggg agt ttt aaa aca aaa cta gac ggc
Ser His Ala Ser Val Arg Asp Gly Ser Phe Lys Thr Lys Leu Asp Gly
                85
agg tcg gga ggc agc cgc cga ttt ttg tcg ggt cct aaa caa aaa tca
                                                                      336
Arg Ser Gly Gly Ser Arg Arg Phe Leu Ser Gly Pro Lys Gln Lys Ser
            100
                                105
                                                                      384
aat gtg ttg cgc ttt gga act ctg ggc atc gtg ggc acc agg ctg acg
Asn Val Leu Arg Phe Gly Thr Leu Gly Ile Val Gly Thr Arg Leu Thr
                            120
ggg gcg gcg ggg atg gcg ttt ctt ggc gag cgg gtc cct cag cca ggc
                                                                      432
Gly Ala Ala Gly Met Ala Phe Leu Gly Glu Arg Val Pro Gln Pro Gly
    130
                        135
                                                                      480
ccg ggt att gtc agg cgt ccc gtg gac ggt cgg gag ggg ctt cct gga
Pro Gly Ile Val Arg Pro Val Asp Gly Arg Glu Gly Leu Pro Gly
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| 145 | 150 | 155 | 160 |
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| Gly Leu Val Pro G | ga acg agt tca a | aag gag gaa agg gcg | gca gct tcc 528 |
| | ly Thr Ser Ser 1 | Lys Glu Glu Arg Ala | Ala Ala Ser |
| | 65 | 170 | 175 |
| ggc gcc ttc ccc a | rg Gly Pro Gly A | gac gca cgc cag gag | ctt cct ccg 576 |
| Gly Ala Phe Pro A | | Asp Ala Arg Gln Glu : | Leu Pro Pro |
| 180 | | 185 | 190 |
| ttg gaa gtc cct t Leu Glu Val Pro S 195 | cc gct ggc gac g er Ala Gly Asp V 200 | gtg ggc gct gtg gcc Val Gly Ala Val Ala . 205 | gcg gcc ctc 624 Ala Ala Leu |
| gtg gag cct gag c Val Glu Pro Glu P 210 | cc tcc tca cgg o ro Ser Ser Arg l 215 | cct ccg cgc agc cct of Pro Pro Arg Ser Pro 0 220 | ggg gcc ccc 672 Gly Ala Pro |
| cgg cag ggt ccc t | cg gca gcc cgc g | ggg aga ggc cgt ggg g | gcc ccg gca 720 |
| Arg Gln Gly Pro S | er Ala Ala Arg (| Gly Arg Gly Arg Gly 2 | Ala Pro Ala |
| 225 | 230 | 235 | 240 |
| Gly Val Trp Phe A | ga gac gag gcg o | ccc tog ccc ccg ccg (| ccc gca gag 768 |
| | rg Asp Glu Ala I | Pro Ser Pro Pro Pro 1 | Pro Ala Glu |
| | 45 | 250 | 255 |
| gcc ccg aag gag c | ro Leu Gln Pro (| gag ccc gcc ccg ccg a | agg ccc agc 816 |
| Ala Pro Lys Glu P | | Glu Pro Ala Pro Pro A | Arg Pro Ser |
| 260 | | 265 | 270 |
| ggc ccc gca acc g Gly Pro Ala Thr A 275 | ca gag gac cct g la Glu Asp Pro 0 280 | ggg cga cgg ccc gtc o Gly Arg Arg Pro Val 1 285 | ctg ccc cag 864 Leu Pro Gln |
| cgg ccc ccc gag g Arg Pro Pro Glu G 290 | ag agg ccg ccc o lu Arg Pro Pro (295 | cag ccg cca ggc tcc a Gln Pro Pro Gly Ser 5 300 | acc ggg gtc 912 Thr Gly Val |
| atc gcg gag acg g | gc cag gcc ggg o | ccc ccc gca ggc gca g | ggc gtg tct 960 |
| Ile Ala Glu Thr G | ly Gln Ala Gly I | Pro Pro Ala Gly Ala G | Gly Val Ser |
| 305 | 310 | 315 | 320 |
| Gly Arg Gly Leu P | cg cgg ggc gtg g | gac ggc cag acc ggg a | agc ggc acc 1008 |
| | ro Arg Gly Val <i>R</i> | Asp Gly Gln Thr Gly a | Ser Gly Thr |
| | 25 | 330 | 335 |
| gtc ccc ggc gca g | lu Gly Phe Ala (| ggc gca cca gga tac o | ccg aag tca 1056 |
| Val Pro Gly Ala G | | Gly Ala Pro Gly Tyr 1 | Pro Lys Ser |
| 340 | | 345 | 350 |
| cct cct gta gct t Pro Pro Val Ala S 355 | cc cca gga gct o er Pro Gly Ala 1 360 | ccg gtg cct tct ctg o Pro Val Pro Ser Leu ' 365 | gtg tct ttt 1104 Val Ser Phe |
| | | ttc ccc agt gat ggg o Phe Pro Ser Asp Gly o 380 | |

| - | ctc Leu 385 | ttt Phe | aac Asn | aaa Lys | gtg Val | ctg Leu 390 | gtg Val | aac Asn | gac Asp | ggg Gly | gat Asp 395 | gtt Val | tac Tyr | aac Asn | ccc Pro | agc Ser 400 | 1200 |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------|
| r | acc Thr | gly aaa | gtc Val | ttc Phe | acg Thr 405 | gct Ala | cct Pro | tat Tyr | gat Asp | 999 Gly 410 | cgc Arg | tac Tyr | ctg Leu | atc Ile | acg Thr 415 | gcc Ala | 1248 |
| i | acc Thr | ctc Leu | acc Thr | ccc Pro 420 | gag Glu | aga Arg | gac Asp | gcc Ala | tac Tyr 425 | gtg Val | gaa Glu | gca Ala | gtg Val | ctg Leu 430 | tcg Ser | gtc Val | 1296 |
| | tcc Ser | aac Asn | gcc Ala 435 | agc Ser | gtg Val | gcc Ala | cag Gln | ctg Leu 440 | cat His | acc Thr | gct Ala | gly ggg | tac Tyr 445 | agg Arg | aga Arg | gag Glu | 1344 |
| | ttc Phe | ctg Leu 450 | gaa Glu | tac Tyr | cac His | cgc Arg | cct Pro 455 | aca Thr | gga Gly | gct Ala | ttg Leu | cat His 460 | acc Thr | tgc Cys | gly ggg | ggc ggc | 1392 |
| | ccg Pro 465 | Gly 999 | gca Ala | ttc Phe | cac His | ctc Leu 470 | atc Ile | gtg Val | cac His | ctg Leu | aag Lys 475 | gcg Ala | gga Gly | gat Asp | gca Ala | gtc Val 480 | 1440 |
| | aac Asn | gtc Val | gtg Val | gtg Val | act Thr 485 | Gly 999 | ggc Gly | aag Lys | ctg Leu | gct Ala 490 | cac His | aca Thr | gac Asp | ttt Phe | gat Asp 495 | gaa Glu | 1488 |
| | atg Met | tac Tyr | tcc Ser | aca Thr 500 | ttt Phe | agt Ser | gly aaa | gtt Val | ttc Phe 505 | tta Leu | tat Tyr | cct Pro | ttc Phe | ctt Leu 510 | tcc Ser | cac His | 1536 |
| | ctc Leu | taa | ggt | ggctq | ggg 9 | gagat | igte | ag gg | ggaaa | agata | a gat | agtt | gta | aaaa | actct | caa | 1592 |
| | agci | ttta | ata 1 | tatt | eggt | tt gi | tatg | taat | g gaa | agcad | cggg | gcta | agagt | ttt (| ccaca | ataggc | 1652 |
| | ccc | aaca | taa : | aggc | cttc | cc to | cgct | gttga | a ggo | ccac | catg | ccti | tact | gca · | tcca | gccagg | 1712 |
| | ctg | cagg | gag | tgag | gcac | ac g | gtga | acat | g gc | cact | gact | ttt | ctgc | cac · | tcta | actgga | 1772 |
| | caa | ctgg | aag | actt | ggaa | ag g | cctc | cacci | t gta | atct | acac | tct | gagg | gaa (| ctgg | actggg | 1832 |
| | cct | gagc | ttg | ccac | agag | gc t | ccgt | ctga | c tg | tggg | ctgg | gag | gagg | gag (| gcag | gggaga | 1892 |
| | gcc | ggtc | acg | gtgg | ctgg | tc t | ttac | tgca | g gg | cagc | actg | tgg | ccag | ctg | tctg | tcttta | 1952 |
| | cac | tgca | tgc | agaa | gttt | aa a | cact | gaag | t gc | cgaa | gtgg | ccc | gtgc | cgc | cgca | cagaga | 2012 |
| | ccc | cgac | ttt | agtt | tggg | ct g | ttgc | acgc | t tg | gata | acca | ttg | ccac | ctg | ggac | ttaacc | 2072 |
| | tgc | tcag | gcg | ggcc | ttcg | cc c | agct | gcaa | a ta | ggga | tgcg | tta | gaga | ctg | ttcc | caaagc | 2132 |
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- <211> 513
- <212> PRT
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Gly Thr Ala Val Pro Pro Ala Pro Gln Val Leu Arg Thr Trp Arg Phe 20 25 30

Gly Thr Glu Arg Gly Ser Val Cys Ser Ser Val Glu Gly Glu Thr Asn 35 40 45

Cys Phe Phe Glu Lys Ala Pro Leu Ser Lys Leu Thr Pro Gly Pro Phe 50 55 60

Ser Thr Thr Ser Asp Ser Phe Ser Glu Phe Ser Asp Glu Ser Ser Ile
65 70 75 80

Ser His Ala Ser Val Arg Asp Gly Ser Phe Lys Thr Lys Leu Asp Gly 85 90 95

Arg Ser Gly Gly Ser Arg Arg Phe Leu Ser Gly Pro Lys Gln Lys Ser

Asn Val Leu Arg Phe Gly Thr Leu Gly Ile Val Gly Thr Arg Leu Thr 115 120 125

Gly Ala Ala Gly Met Ala Phe Leu Gly Glu Arg Val Pro Gln Pro Gly 130 135 140

Pro Gly Ile Val Arg Arg Pro Val Asp Gly Arg Glu Gly Leu Pro Gly 145 150 155 160

Gly Leu Val Pro Gly Thr Ser Ser Lys Glu Glu Arg Ala Ala Ser 165 170 175

| Gly | Ala | Phe | Pro 180 | Arg | Gly | Pro | Gly | Asp 185 | Ala | Arg | Gln | Glu | Leu 190 | Pro | Pro |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu | Glu | Val 195 | Pro | Ser | Ala | Gly | Asp 200 | Val | Gly | Ala | Val | Ala 205 | Ala | Ala | Leu |
| Val | Glu 210 | Pro | Glu | Pro | Ser | Ser 215 | Arg | Pro | Pro | Arg | Ser 220 | Pro | Gly | Ala | Pro |
| Arg 225 | Gln | Gly | Pro | Ser | Ala 230 | Ala | Arg | Gly | Arg | Gly 235 | Arg | Gly | Ala | Pro | Ala 240 |
| Gly | Val | Trp | Phe | Arg 245 | Asp | Glu | Ala | Pro | Ser 250 | Pro | Pro | Pro | Pro | Ala 255 | Glu |
| Ala | Pro | Lys | Glu 260 | Pro | Leu | Gln | Pro | Glu 265 | Pro | Ala | Pro | Pro | Arg 270 | Pro | Ser |
| Gly | Pro | Ala 275 | Thr | Ala | Glu | Asp | Pro 280 | Gly | Arg | Arg | Pro | Val 285 | Leu | Pro | Gln |
| Arg | Pro 290 | Pro | Glu | Glu | Arg | Pro 295 | Pro | Gln | Pro | Pro | Gly 300 | Ser | Thr | Gly | Val |
| Ile 305 | Ala | Glu | Thr | Gly | Gln 310 | Ala | Gly | Pro | Pro | Ala 315 | Gly | Ala | Gly | Val | Ser 320 |
| Gly | Arg | Gly | Leu | Pro 325 | Arg | Gly | Val | Asp | Gly 330 | Gln | Thr | Gly | Ser | Gly 335 | Thr |
| Val | Pro | Gly | Ala 340 | Glu | Gly | Phe | Ala | Gly 345 | Ala | Pro | Gly | Tyr | Pro 350 | Lys | Ser |
| Pro | Pro | Val 355 | Ala | Ser | Pro | Gly | Ala 360 | Pro | Val | Pro | Ser | Leu 365 | Val | Ser | Phe |
| Ser | Ala 370 | Gly | Leu | Thr | Gln | Lys 375 | Pro | Phe | Pro | Ser | Asp 380 | Gly | Gly | Val | Val |

Leu Phe Asn Lys Val Leu Val Asn Asp Gly Asp Val Tyr Asn Pro Ser 385 390 395 400

Thr Gly Val Phe Thr Ala Pro Tyr Asp Gly Arg Tyr Leu Ile Thr Ala 410 405 Thr Leu Thr Pro Glu Arg Asp Ala Tyr Val Glu Ala Val Leu Ser Val 420 Ser Asn Ala Ser Val Ala Gln Leu His Thr Ala Gly Tyr Arg Arg Glu 440 435 Phe Leu Glu Tyr His Arg Pro Thr Gly Ala Leu His Thr Cys Gly Gly 455 450 Pro Gly Ala Phe His Leu Ile Val His Leu Lys Ala Gly Asp Ala Val 475 470 465 Asn Val Val Thr Gly Gly Lys Leu Ala His Thr Asp Phe Asp Glu 490 485 Met Tyr Ser Thr Phe Ser Gly Val Phe Leu Tyr Pro Phe Leu Ser His 510 505 Leu

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<211> 1542

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<213> Homo sapiens

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480 cctcagccag gcccgggtat tgtcaggcgt cccgtggacg gtcgggaggg gcttcctgga 540 gggctcgttc cgggaacgag ttcaaaggag gaaagggcgg cagcttccgg cgccttcccc 600 agagggccgg gagacgcacg ccaggagctt cctccgttgg aagtcccttc cgctggcgac gtgggcgctg tggccgcggc cctcgtggag cctgagccct cctcacggcc tccgcgcagc 660 720 cctggggccc cccggcaggg tccctcggca gcccgcggga gaggccgtgg ggccccggca 780 ggagtgtggt tcagagacga ggcgccctcg ccccgccgc ccgcagaggc cccgaaggag ccgctgcage ccgagcccgc cccgccgagg cccagcggcc ccgcaaccgc agaggaccct 840 gggcgacggc ccgtcctgcc ccagcggccc cccgaggaga ggccgcccca gccgccaggc 900 960 tecacegggg teategegga gaegggeeag geegggeeee eegeaggege aggegtgtet gggcggggtc tgccgcgggg cgtggacggc cagaccggga gcggcaccgt ccccggcgca 1020 1080 gaaggetteg egggegeace aggataceeg aagteacete etgtagette eecaggaget ceggtgeett etetggtgte tttttetgeg gggeteacce agaageettt ecccagtgat 1140 gggggcgttg tcctctttaa caaagtgctg qtgaacqacg gggatgttta caaccccaqc 1200 accggggtct tcacggctcc ttatgatggg cgctacctga tcacggccac cctcaccccc 1260 gagagagacg cctacgtgga agcagtgctg teggteteca aegecagegt ggeccagetg 1320 cataccgctg ggtacaggag agagttcctg gaataccacc gccctacagg agctttgcat 1380 acctgegggg gcccgggggc attccacctc ategtgcacc tgaaggeggg agatgcagtc 1440 aacgtcgtgg tgactggggg caagctggct cacacagact ttgatgaaat gtactccaca 1500 tttagtgggg ttttcttata tcctttcctt tcccacctct aa 1542

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<211> 36

<212> PRT

<213> Homo sapiens

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Val Val Leu Phe Asn Lys Val Leu Val Asn Asp Gly Asp Val Tyr Asn 1 5 10 15

Pro Ser Thr Gly Val Phe Thr Ala Pro Tyr Asp Gly Arg Tyr Leu Ile

Thr Ala Thr Leu 35

<210> 351

<211> 27

<212> PRT

<213> Homo sapiens

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Phe Pro Ser Asp Gly Gly Val Val Leu Phe Asn Lys Val Leu Val Asn 1 5 10 15

Asp Gly Asp Val Tyr Asn Pro Ser Thr Gly Val 20 25

<210> 352

<211> 171

<212> PRT

<213> Homo sapiens

<400> 352

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1 5 10 15

Thr Thr Arg Ser Ala Glu Leu Lys Ala Val Gly Phe Glu Ala Ala Leu 20 25 30

Gln Glu Val Ile Thr Pro Glu Val Val Pro Ala Ser Gln Ser Glu Ala 35 40 45

Tyr Gln Thr Leu Arg Gln Asn Gln Ala Gln Val His Asn Phe Phe 50 55 60

Phe Trp Gly Gly Asp Ser Pro Thr Leu Ser Pro Arg Leu Glu Cys Ser 65 70 75 80

Ser Ala Ile Ser Ala His Cys Asn Leu Arg Leu Pro Gly Ser Ser Asn 85 Ser Pro Thr Ser Ala Ser Arg Val Ala Gly Thr Thr Gly Ala Cys Arg 1.05 100 His Ala Arg Leu Ile Phe Cys Ile Leu Val Glu Met Gly Phe His Arg Val Ala Gln Ala Gly Arg Glu Leu Leu Ser Ser Ala Asn Pro Pro Thr 130 Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly Met Ser His His Ala Gln 155 145 Pro Ser Ser Gln Leu Leu Ile Ser Ser Cys Cys 165 <210> 353 <211> 418 <212> DNA <213> Homo sapiens <400> 353 60 gaattetteg tegacgatte egtgteeact gggaggaggg ageaggeegg aegtetgeee cgtccccggt gggtgcgggg gcgtcaggtg ggcaaaaccc cagcgagggg aagctccagg atcgttgcag tgccatttct aggtccctcc tcctctcccc acttcccttt tctctgcacc

cgtcccggt gggtgcgggg gcgtcaggtg ggcaaaaccc cagcgagggg aagctccagg 120
atcgttgcag tgccattct aggtccctcc tcctctcccc acttccttt tctctgcacc 180
catttgacag gagcctctgc aatcatctgc ttattgcgcg tcaccgtcat ccagtgggag 240
agccttgtgg taccaccttt ctccacctat ggctgcggcc cgcaggaaga tgacgggttg 300
ctcttctgct ctggagccat ccctgttgcc ggtaactgca acccgcaaga tgatgccaga 360
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<212> DNA

<213> Homo sapiens

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| gagegeaaaa eetaetagga gategegeee ggtgageage accegeaget cagageeegg | 180 |
| gacgtccgga gcgcggggag cagtcccctc tccatcaggg agtggtctat ctgggcagtc | 240 |
| tgggacccag gcaccgcgcc atccctgaga gagcagcagt ctggagagca ggcatctcag | 300 |
| atccctaaga aaccagccgt ccgagaagcc gcggatctca ggtgcccagg atcgttagga | 360 |
| ctgaacggga gggtactaga ggaccactgg ctctggaccg tcgggagctg cccctgacgt | 420 |
| aacccacgag gggcctcccc ttgacggacg gcttggggag cggcaccgcc ggcctggagc | 480 |
| ccgcagaggc agggtaaggg gagcgggggg cagccgtcgg gggagtgcag acccaggccc | 540 |
| aaggegggte acegeteetg geeegeggag ageeeeggee eeggeageea ttgegeeeaa | 600 |
| gagtgaggaa gatttgctgg ccctggcagc gtcgcggctg agccggcgca agagggtggc | 660 |
| gggcgcggcc gtcggagtgg cc atg gtg ctg ctg ctg ctg gtg gcc atc ccg Met Val Leu Leu Leu Val Ala Ile Pro 1 5 10 | 712 |
| ctg ctg gtg cac agc tcc cgc ggg cca gcg cac tac gag atg ctg ggt Leu Leu Val His Ser Ser Arg Gly Pro Ala His Tyr Glu Met Leu Gly 15 20 25 | 760 |
| cgc tgc cgc atg gtg tgc gac ccg cat ggg ccc cgt ggc cct ggt ccc Arg Cys Arg Met Val Cys Asp Pro His Gly Pro Arg Gly Pro Gly Pro 30 35 40 | 808 |
| gac ggc gcg cct gct tcc gtg ccc ccc ttc ccg cca ggc gcc aag gga Asp Gly Ala Pro Ala Ser Val Pro Pro Phe Pro Pro Gly Ala Lys Gly 45 50 55 | 856 |
| gag gtg ggc cgg cgc ggg aaa gca ggc ctg cgg ggg ccc cct gga cca Glu Val Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro 60 65 70 | 904 |

| | | | | | | | _ | | | | | | | ccg Pro 90 | 952 |
|---|---|-------------------|---|---|---|---|---|---|---|-----|------|------|----|------------------|------|
| | | | | | | | | | | | | | | tac Tyr | 1000 |
| | | | | | | | | | | | | | | ggt | 1048 |
| | | ctg Leu | _ | | _ | - | | | | | | | | gcc Ala | 1096 |
| | | gcc Ala | | | | | | | | | | | _ | | 1144 |
| | | tac Tyr | | | | | | | | | | | | | 1192 |
| _ | _ | ctc Leu | _ | _ | | | _ | | | | | _ | _ | _ | 1240 |
| | | gca Ala 190 | | | | | | | | | | | | | 1288 |
| | | atc Ile | | | | | | | | | | | | | 1336 |
| | | gta Val | | | | | | | | | | | | | 1384 |
| | | ttg Leu | | | | | | | | | | | | | 1432 |
| | | caa Gln | | | | | | | | | | | | | 1480 |
| - | | atg Met 270 | _ | | _ | | | _ | _ | | _ | | _ | - | 1528 |
| | | tca Ser | | | | | | _ | _ | taa | cctt | cegg | ac | | 1574 |

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<211> 293

<212> PRT

<213> Homo sapiens

<400> 355

Met Val Leu Leu Leu Val Ala Ile Pro Leu Leu Val His Ser Ser 1 5 10 15

Arg Gly Pro Ala His Tyr Glu Met Leu Gly Arg Cys Arg Met Val Cys 20 25 30

Asp Pro His Gly Pro Arg Gly Pro Gly Pro Asp Gly Ala Pro Ala Ser 35 40 45

Val Pro Pro Phe Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg Gly 50 55 60

Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro 65 70 75 80

Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly 85 90 95

Pro Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro Arg Ile Ala Phe 100 105 110

Tyr Ala Gly Leu Arg Arg Pro His Glu Gly Tyr Glu Val Leu Arg Phe 115 120 125

Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu Ala Ala Ser Gly 130 135 140

Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala Asp Leu Met Lys 165 170 175

| Asn | Gly | Gln | Gly 180 | Trp | Gly | Pro | Arg | Thr 185 | Ala | Leu | Pro | Ser | Ala 190 | Glu | Ser | |
|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----|
| Val . | Ala | Trp 195 | Gln | Leu | Lys | Gly | Gln 200 | Pro | Gly | Ala | Ser | Ala 205 | Ile | Ile | Cys | |
| Leu | Leu 210 | Arg | Val | Thr | Val | Ile 215 | Gln | Trp | Glu | Ser | Leu 220 | Val | Val | Pro | Pro | |
| Phe 225 | Ser | Thr | Tyr | Gly | Cys 230 | Gly | Pro | Gln | Glu | Asp 235 | Asp | Gly | Leu | Arg | Phe 240 | |
| Cys | Ser | Gly | Ala | Ser 245 | Pro | Val | Ala | Gly | Asn 250 | Cys | Asn | Pro | Gln | Asp 255 | Asp | |
| Ala | Arg | Ala | Gln 260 | Leu | Pro | Ser | Phe | Tyr 265 | Val | Ala | Glu | Phe | Met 270 | Leu | Pro | |
| Cys | Thr | Glu 275 | Gln | Thr | Leu | Ser | Leu 280 | Thr | Gln | Pro | Cys | Pro 285 | Ser | Pro | Cys | |
| | Val 290 | Ile | Pro | Glu | | | | | | | | | | | | |
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| <211 | .> ; | 882 | | | | | | | | | | | | | | |
| <212 | ?>] | DNA | | | | | | | | | | | | | | |
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| <400 atgg | | 356 tgc | tgct | gctg | gt g | gcca | tccc | g ct | gctg | gtgc | aca | gctc | ccg | cggg | ccagcg | 60 |
| cact | acg | aga | tgct | gggt | cg c | tgcc | gcat | g gt | gtgc | gacc | cgc | atgg | gcc | ccgt | ggccct | 120 |
| ggto | cccg | acg | gcgc | gcct | gc t | tccg | tgcc | c cc | cttc | ccgc | cag | gcgc | caa | ggga | gaggtg | 180 |
| ggad | cggc | gcg | ggaa | agca | gg c | ctgc | gggg | g cc | ccct | ggac | cac | cagg | tcc | aaga | gggccc | 240 |

360

ccaggagaac ccggcaggcc aggccccccg ggccctcccg gtccaggtcc gggcggggtg

gegeeegetg ceggetacgt geetegeatt getttetacg egggeetgeg geggeeecac

gagggttacg aggtgctgcg cttcgacgac gtggtgacca acgtgggcaa cgcctacgag 420 gcagccagcg gcaagtttac ttgccccatg ccaggcgtct acttcttcgc ttaccacgtg 480 ctcatgcgcg gcggcgacgg caccagcatg tgggccgacc tcatgaagaa cggacagggc 540 tgggggccta gaacggcctt gccctcagca gagtctgtgg cttggcagct caagggccag 600 660 ccaggagcct ctgcaatcat ctgcttattg cgcgtcaccg tcatccagtg ggagagcctt 720 gtggtaccac ctttctccac ctatggctgc ggcccgcagg aagatgacgg gttgcgcttc tgctctggag ccagccctgt tgccgggaac tgcaacccgc aagatgatgc cagagctcag 780 cttccctctt tttatgttgc agagtttatg ctgccctgca ctgagcagac gctttcgctt 840 882 acgcagccct gcccttcacc ttgcccagtg attccggaat aa

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<211> 15

<212> PRT

<213> Homo sapiens

<400> 357

Met Val Leu Leu Leu Val Ala Ile Pro Leu Leu Val His Ser 1 5 10 15

<210> 358

<211> 278

<212> PRT

<213> Homo sapiens

<400> 358

Ser Arg Gly Pro Ala His Tyr Glu Met Leu Gly Arg Cys Arg Met Val 1 5 10 15

Cys Asp Pro His Gly Pro Arg Gly Pro Gly Pro Asp Gly Ala Pro Ala 20 25 30

Ser Val Pro Pro Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg

Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly 50 55 60

Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro 65 70 75 80

Gly Pro Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro Arg Ile Ala 85 90 95

Phe Tyr Ala Gly Leu Arg Arg Pro His Glu Gly Tyr Glu Val Leu Arg

Phe Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu Ala Ala Ser 115 120 125

Gly Lys Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe Ala Tyr His 130 135 140

Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala Asp Leu Met 145 150 155 160

Lys Asn Gly Gln Gly Trp Gly Pro Arg Thr Ala Leu Pro Ser Ala Glu 165 170 175

Ser Val Ala Trp Gln Leu Lys Gly Gln Pro Gly Ala Ser Ala Ile Ile 180 185 190

Cys Leu Leu Arg Val Thr Val Ile Gln Trp Glu Ser Leu Val Val Pro 195 200 205

Pro Phe Ser Thr Tyr Gly Cys Gly Pro Gln Glu Asp Asp Gly Leu Arg 210 215 220

Phe Cys Ser Gly Ala Ser Pro Val Ala Gly Asn Cys Asn Pro Gln Asp 225 230 235 240

Asp Ala Arg Ala Gln Leu Pro Ser Phe Tyr Val Ala Glu Phe Met Leu 245 250 255

Pro Cys Thr Glu Gln Thr Leu Ser Leu Thr Gln Pro Cys Pro Ser Pro 260 265 270

<213> Homo sapiens

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Cys Pro Val Ile Pro Glu
       275
<210> 359
<211> 36
<212> PRT
<213> Homo sapiens
<400> 359
Val Leu Arg Phe Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu
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    5
Ala Ala Ser Gly Lys Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe
                             25
Ala Tyr His Val
 35
<210> 360
<211> 20
<212> PRT
<213> Homo sapiens
<400> 360
Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe Ala Tyr His Val Leu
1 5
Met Arg Gly Gly
           20
<210> 361
<211> 27
<212> PRT
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<211> 27

<212> PRT

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<400> 361
Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly
               5
Pro Pro Gly Pro Pro Gly Pro Gly Gly
<210> 362
<211> 27
<212> PRT
<213> Homo sapiens
<400> 362
Gly Pro Pro Gly Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
                                  10
Arg Pro Gly Pro Pro Gly Pro Gly Pro Gly
           20
<210> 363
<211> 27
<212> PRT
<213> Homo sapiens
<400> 363
Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly
                                  10
Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro
                               25
           20
<210> 364
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<213> Homo sapiens
<400> 364
Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly
                                   10
Pro Gly Pro Gly Gly Val Ala Pro Ala Ala Gly
<210> 365
<211> 29
<212> PRT
<213> Homo sapiens
<400> 365
Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly
Pro Pro Gly Pro Pro Gly Pro Gly Pro Gly Val Ala
                               25
            20
<210> 366
<211> 27
<212> PRT
<213> Homo sapiens
<400> 366
Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly
                                    10
                5
Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro
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<210> 367

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<211> 29
<212> PRT
<213> Homo sapiens
<400> 367
Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
Arg Pro Gly Pro Pro Gly Pro Gly Pro Gly Pro Gly
<210> 368
<211> 29
<212> PRT
<213> Homo sapiens
<400> 368
Gly Ala Lys Gly Glu Val Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly
                                   10
               5
Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu
<210> 369
<211> 27
<212> PRT
<213> Homo sapiens
<400> 369
Pro His Glu Gly Tyr Glu Val Leu Arg Phe Asp Asp Val Val Thr Asn
Val Gly Asn Ala Tyr Glu Ala Ala Ser Gly Lys
            20
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<210> 370
<211> 14
<212> PRT
<213> Homo sapiens
<400> 370
Gly Pro Pro Gly Pro Gly Pro Arg Gly Pro Pro Gly Glu
               5
<210> 371
<211> 27
<212> PRT
<213> Homo sapiens
<400> 371
Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Gly Pro Gly Pro
                                  10
Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro
                              25
           20
<210> 372
<211> 27
<212> PRT
<213> Homo sapiens
<400> 372
Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly
Pro Pro Gly Pro Gly Pro Gly Val Ala Pro
                               25
            20
```

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<210> 373
<211> 24
<212> PRT
<213> Homo sapiens
<400> 373
Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Gly Pro Gly Pro
Gly Gly Val Ala Pro Ala Ala Gly
           20
<210> 374
<211> 44
<212> PRT
<213> Homo sapiens
<400> 374
Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro
                                   10
               5
Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Pro Pro
                                                  30
Gly Pro Gly Pro Gly Gly Val Ala Pro Ala Ala Gly
<210> 375
<211> 27
<212> PRT
<213> Homo sapiens
<400> 375
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Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly

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| Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro 20 25 | |
| <210> 376 | |
| <211> 29 | |
| <212> PRT | |
| <213> Homo sapiens | |
| <400> 376 | |
| Phe Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg Gly Lys Ala Gly 1 5 10 15 | |
| Leu Arg Gly Pro Pro Gly Pro Gly Pro Arg Gly Pro 20 25 | |
| <210> 377 | |
| <211> 2016 | |
| <212> DNA | |
| <213> Homo sapiens | |
| | |
| <220> | |
| <221> CDS | |
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| ctagcaggga ctggggccgc ggcaggggta gcaaggtgag tcggtgcttg ccaagaggca | 120 |
| gagogoaaaa ootaotagga gatogogoo ggtgagoago accogoagot cagagooogg | 180 |
| gacgtccgga gcgcggggag cagtcccctc tccatcaggg agtggtctat ctgggcagtc | 240 |

300

tgggacccag gcaccgcgcc atccctgaga gagcagcagt ctggagagca ggcatctcag

| atccctaaga aaccagccgt ccgagaagcc gcggatctca ggtgcccagg atcgttagga | 360 |
|---|------|
| ctgaacggga gggtactaga ggaccactgg ctctggaccg tcgggagctg cccctgacgt | 420 |
| aacccacgag gggcctcccc ttgacggacg gcttggggag cggcaccgcc ggcctggagc | 480 |
| ccgcagaggc agggtaaggg gagcgggggg cagccgtcgg gggagtgcag acccaggccc | 540 |
| aaggegggte acegeteetg geeegeggag ageeeeggee eeggeageea ttgegeecaa | 600 |
| gagtgaggaa gatttgctgg ccctggcagc gtcgcggctg agccggcgca agagggtggc | 660 |
| gggcgcggcc gtcggagtgg cc atg gtg ctg ctg ctg ctg gtg gcc atc ccg Met Val Leu Leu Leu Val Ala Ile Pro 1 5 10 | 712 |
| ctg ctg gtg cac agc tcc cgc ggg cca gcg cac tac gag atg ctg ggt Leu Leu Val His Ser Ser Arg Gly Pro Ala His Tyr Glu Met Leu Gly 15 20 25 | 760 |
| cgc tgc cgc atg gtg tgc gac ccg cat ggg ccc cgt ggc cct ggt ccc Arg Cys Arg Met Val Cys Asp Pro His Gly Pro Arg Gly Pro Gly Pro 30 35 40 | 808 |
| gac ggc gcg cct gct tcc gtg ccc ccc ttc ccg cca ggc gcc aag gga Asp Gly Ala Pro Ala Ser Val Pro Pro Phe Pro Pro Gly Ala Lys Gly 45 50 55 | 856 |
| gag gtg ggc cgg cgc ggg aaa gca ggc ctg cgg ggg ccc cct gga cca Glu Val Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro 60 65 70 | 904 |
| cca ggt cca aga ggg ccc cca gga gaa ccc ggc agg cca ggc ccc cc | 952 |
| ggc cct ccc ggt cca ggt ccg ggc ggg gtg gcg ccc gct gcc ggc tac Gly Pro Pro Gly Pro Gly Pro Gly Val Ala Pro Ala Ala Gly Tyr 95 100 105 | 1000 |
| gtg cct cgc att gct ttc tac gcg ggc ctg cgg cgg ccc cac gag ggt Val Pro Arg Ile Ala Phe Tyr Ala Gly Leu Arg Arg Pro His Glu Gly 110 115 120 | 1048 |
| tac gag gtg ctg cgc ttc gac gac gtg gtg acc aac gtg ggc aac gcc Tyr Glu Val Leu Arg Phe Asp Asp Val Val Thr Asn Val Gly Asn Ala 125 130 135 | 1096 |
| tac gag gca gcc agc ggc aag ttt act tgc ccc atg cca ggc gtc tac Tyr Glu Ala Ala Ser Gly Lys Phe Thr Cys Pro Met Pro Gly Val Tyr 140 145 150 | 1144 |
| ttc ttc gct tac cac gtg ctc atg cgc ggc ggc gac ggc acc agc atg Phe Phe Ala Tyr His Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met 155 160 165 170 | 1192 |

| tgg gcc gac ctc atg aag aac gga cag gtc cgg gcc agc gcc att gct Trp Ala Asp Leu Met Lys Asn Gly Gln Val Arg Ala Ser Ala Ile Ala 175 180 185 | 1240 |
|---|------|
| cag gac gcg gac cag aac tac gac tac gcc agc aac agc gtc att ctg Gln Asp Ala Asp Gln Asn Tyr Asp Tyr Ala Ser Asn Ser Val Ile Leu 190 195 200 | 1288 |
| cac ctg gac gtg ggc gac gag gtc ttc atc aag ctg gac ggc ggg aaa His Leu Asp Val Gly Asp Glu Val Phe Ile Lys Leu Asp Gly Gly Lys 205 210 215 | 1336 |
| gtg cac ggc ggc aac acc aac aag tac agc acc ttc tcc ggc ttc atc Val His Gly Gly Asn Thr Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile 220 225 230 | 1384 |
| atc tac ccc gac tga gccggccccg ccccgtgccc ccgctcgccc cttctctccc Ile Tyr Pro Asp 235 | 1439 |
| gtcctcaccc acctcctgcc cgccccaccc gaggcgccac cccacccttt gagagcctgg | 1499 |
| cggtggggtg gaccetteeg tteeeggagg eggeetaaat gggegaacte ttggtgetea | 1559 |
| agggtataag tggccgggaa gaggaggaga cccggccaga ggagcagagc gacttccgga | 1619 |
| gggatcaccc gcacccaagt gcgcgctgga ccccataggg gcagaggtcg tggctttctc | 1679 |
| ttttgtacag agatggggag cagttttaat agcgggactc agaggcccag aaagccggag | 1739 |
| ggaagccccc gcagcttgcg agggaaataa cagaaacagg aggagcccat ttaggcaaga | 1799 |
| gaagacatta aaacagggta gtgcaggttc tccgtcacaa ctttctctcg ccaccctctc | 1859 |
| gtcccctcgt ctccactttc aggctcaggc tccagccttg gcagccttcc tgtgaactgg | 1919 |
| aggaaccagt gaattettte etggeattta aaaegeatte tgtacagtee ecatteecee | 1979 |
| ctatccggac taggccctgg ggctacagct gctgctg | 2016 |

<210> 378

<211> 238

<212> PRT

<213> Homo sapiens

<400> 378

Met Val Leu Leu Leu Val Ala Ile Pro Leu Leu Val His Ser Ser 1 5 10 15

Arg Gly Pro Ala His Tyr Glu Met Leu Gly Arg Cys Arg Met Val Cys 20 25 30

Asp Pro His Gly Pro Arg Gly Pro Gly Pro Asp Gly Ala Pro Ala Ser 35 40 45

Val Pro Pro Phe Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg Gly 50 55 60

Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro 65 70 75 80

Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly 85 90 95

Pro Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro Arg Ile Ala Phe 100 105 110

Tyr Ala Gly Leu Arg Arg Pro His Glu Gly Tyr Glu Val Leu Arg Phe 115 120 125

Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu Ala Ala Ser Gly 130 135 140

Lys Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe Ala Tyr His Val 145 150 150 155

Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala Asp Leu Met Lys 165 170 175

Asn Gly Gln Val Arg Ala Ser Ala Ile Ala Gln Asp Ala Asp Gln Asn 180 185 190

Tyr Asp Tyr Ala Ser Asn Ser Val Ile Leu His Leu Asp Val Gly Asp 195 200 205

Glu Val Phe Ile Lys Leu Asp Gly Gly Lys Val His Gly Gly Asn Thr 210 215 220

Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile Ile Tyr Pro Asp 225 230 235

<210> 379

| <211> | 717 | |
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| <212> | DNA | |
| <213> | Homo | sapiens |

<400> 379 60 atggtgctgc tgctgctggt ggccatcccg ctgctggtgc acagctcccg cgggccagcg cactacgaga tgctgggtcg ctgccgcatg gtgtgcgacc cgcatgggcc ccgtggccct 120 ggtcccgacg gcgcgcctgc ttccgtgccc cccttcccgc caggcgccaa gggagaggtg 180 ggccggcgcg ggaaagcagg cctgcggggg ccccctggac caccaggtcc aagagggccc 240 ccaggagaac ccggcaggcc aggccccccg ggccctcccg gtccaggtcc gggcggggtg 300 gegeeegetg eeggetacgt geetegeatt getttetaeg egggeetgeg geggeeecae 360 gagggttacg aggtgctgcg cttcgacgac gtggtgacca acgtgggcaa cgcctacgag 420 gcagccagcg gcaagtttac ttgccccatg ccaggcgtct acttcttcgc ttaccacgtg 480 ctcatgcgcg gcggcgacgg caccagcatg tgggccgacc tcatgaagaa cggacaggtc 540 cgggccagcg ccattgctca ggacgcggac cagaactacg actacgccag caacagcgtc 600 attctgcacc tggacgtggg cgacgaggtc ttcatcaagc tggacggcgg gaaagtgcac 660 ggcggcaaca ccaacaagta cagcacette teeggettea teatetaeee egactga 717

<210> 380

<211> 223

<212> PRT

<213> Homo sapiens

<400> 380

Ser Arg Gly Pro Ala His Tyr Glu Met Leu Gly Arg Cys Arg Met Val 1 5 10 15

Cys Asp Pro His Gly Pro Arg Gly Pro Gly Pro Asp Gly Ala Pro Ala 20 ; 25 30

Ser Val Pro Pro Phe Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg 35 40 45

Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly 50 55 60

Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro 65 70 75 80

Gly Pro Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro Arg Ile Ala 85 90 95

Phe Tyr Ala Gly Leu Arg Arg Pro His Glu Gly Tyr Glu Val Leu Arg

Phe Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu Ala Ala Ser 115 120 125

Gly Lys Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe Ala Tyr His 130 135 140

Val Leu Met Arg Gly Gly Asp Gly Thr Ser Met Trp Ala Asp Leu Met 145 150 155 160

Lys Asn Gly Gln Val Arg Ala Ser Ala Ile Ala Gln Asp Ala Asp Gln 165 170 175

Asn Tyr Asp Tyr Ala Ser Asn Ser Val Ile Leu His Leu Asp Val Gly
180 185 190

Asp Glu Val Phe Ile Lys Leu Asp Gly Gly Lys Val His Gly Gly Asn 195 200 205

Thr Asn Lys Tyr Ser Thr Phe Ser Gly Phe Ile Ile Tyr Pro Asp 210 215 220

<210> 381

<211> 36

<212> PRT

<213> Homo sapiens

<400> 381

<211> 27

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Val Leu Arg Phe Asp Asp Val Val Thr Asn Val Gly Asn Ala Tyr Glu
Ala Ala Ser Gly Lys Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe
                               25
Ala Tyr His Val
        35
<210> 382
<211> 20
<212> PRT
<213> Homo sapiens
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Phe Thr Cys Pro Met Pro Gly Val Tyr Phe Phe Ala Tyr His Val Leu
Met Arg Gly Gly
<210> 383
<211> 27
<212> PRT
<213> Homo sapiens
<400> 383
Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly
                                                       15
                5
Pro Pro Gly Pro Pro Gly Pro Gly Pro Gly Gly
            20
<210> 384
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Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
                                   10
               5
Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro Gly
<210> 385
<211> 22
<212> PRT
<213> Homo sapiens
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Asp Tyr Ala Ser Asn Ser Val Ile Leu His Leu Asp Val Gly Asp Glu
                                  10
Val Phe Ile Lys Leu Asp
            20
<210> 386
<211> 20
<212> PRT
<213> Homo sapiens
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Asp Tyr Ala Ser Asn Ser Val Ile Leu His Leu Asp Val Gly Asp Glu
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Val Phe Ile Lys

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<210> 387

10

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<211> 27
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<213> Homo sapiens
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Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly
                                   10
Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro
<210> 388
<211> 27
<212> PRT
<213> Homo sapiens
<400> 388
Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly
Pro Gly Pro Gly Gly Val Ala Pro Ala Ala Gly
<210> 389
<211> 29
<212> PRT
<213> Homo sapiens
<400> 389
Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly
               5
                                   10
Pro Pro Gly Pro Pro Gly Pro Gly Gly Val Ala
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20

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·<210> 390
<211> 27
<212> PRT
<213> Homo sapiens
<400> 390
Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly
Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro
<210> 391
<211> 29
<212> PRT
<213> Homo sapiens
<400> 391
Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly
Arg Pro Gly Pro Pro Gly Pro Gly Pro Gly Pro Gly
           20
<210> 392
<211> 29
<212> PRT
<213> Homo sapiens
<400> 392
Gly Ala Lys Gly Glu Val Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly
                                   10
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Pro Pro Gly Pro Gly Pro Arg Gly Pro Pro Gly Glu
<210> 393
<211> 27
<212> PRT
<213> Homo sapiens
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Pro His Glu Gly Tyr Glu Val Leu Arg Phe Asp Asp Val Val Thr Asn
                                  10
               5
Val Gly Asn Ala Tyr Glu Ala Ala Ser Gly Lys
<210> 394
<211> 14
<212> PRT
<213> Homo sapiens
<400> 394
Gly Pro Pro Gly Pro Gly Pro Arg Gly Pro Pro Gly Glu
<210> 395
<211> 27
<212> PRT
<213> Homo sapiens
<400> 395
Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Gly Pro Gly Pro
                                   10
                5
```

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Gly Gly Val Ala Pro Ala Ala Gly Tyr Val Pro
           20
<210> 396
<211> 27
<212> PRT
<213> Homo sapiens
<400> 396
Gly Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly
                                   10
Pro Pro Gly Pro Gly Pro Gly Val Ala Pro
           20
<210> 397
<211> 24
<212> PRT
<213> Homo sapiens
<400> 397
Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Gly Pro Gly Pro
                                                       15
               5
                                   10
Gly Gly Val Ala Pro Ala Ala Gly
<210> 398
<211> 44
<212> PRT
<213> Homo sapiens
<400> 398
Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro
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10

15

Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro 20 25 30

Gly Pro Gly Pro Gly Gly Val Ala Pro Ala Ala Gly 35

<210> 399

<211> 27

<212> PRT

<213> Homo sapiens

<400> 399

Gly Arg Arg Gly Lys Ala Gly Leu Arg Gly Pro Pro Gly Pro Pro Gly 1 5 10 15

Pro Arg Gly Pro Pro Gly Glu Pro Gly Arg Pro

<210> 400

<211> 10

<212> PRT

<213> Homo sapiens

<400> 400

Ser Thr Phe Ser Gly Phe Ile Ile Tyr Pro 1 5 10

<210> 401

<211> 29

<212> PRT

<213> Homo sapiens

<400> 401

Phe Pro Pro Gly Ala Lys Gly Glu Val Gly Arg Arg Gly Lys Ala Gly
1 5 10 15

Leu Arg Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly Pro 20 25

<210> 402

<211> 243

<212> PRT

<213> Macaca mulatta

<400> 402

Met Leu Leu Gly Ala Val Leu Leu Leu Leu Ala Leu Pro Ser His Gly
1 5 10 15

Gln Asp Thr Thr Gln Gly Pro Gly Val Leu Leu Pro Leu Pro Lys 20 25 30

Gly Ala Cys Thr Gly Trp Met Ala Gly Ile Pro Gly His Pro Gly His 35 40 45

Asn Gly Val Pro Gly Arg Asp Gly Arg Asp Gly Thr Pro Gly Glu Lys 50 55 60

Gly Glu Lys Gly Asp Pro Gly Leu Ile Gly Pro Lys Gly Asp Thr Gly 65 70 75 80

Glu Thr Gly Val Thr Gly Ala Glu Gly Pro Arg Gly Phe Pro Gly Ile $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$

Gln Gly Arg Lys Gly Glu Pro Gly Glu Gly Ala Tyr Val Tyr Arg Ser 100 105 110

Ala Phe Ser Val Gly Leu Glu Thr Tyr Val Thr Val Pro Asn Met Pro 115 120 125

Ile Arg Phe Thr Lys Ile Phe Tyr Asn Gln Gln Asn His Tyr Asp Gly 130 135 140

Ser Thr Gly Lys Phe His Cys Asn Ile Pro Gly Leu Tyr Tyr Phe Ala 145 150 150 160

Tyr His Ile Thr Val Tyr Met Lys Asp Val Lys Val Ser Leu Phe Lys 165 170 175

Lys Asp Lys Ala Met Leu Phe Thr Tyr Asp Gln Tyr Gln Glu Asn Asn 180 185 190

Val Asp Gln Ala Ser Gly Ser Val Leu Leu His Leu Glu Val Gly Asp 195 200 205

Gln Val Trp Leu Gln Val Tyr Gly Glu Gly Glu Arg Asn Gly Leu Tyr 210 215 220

Ala Asp Asn Asp Asn Asp Ser Thr Phe Thr Gly Phe Leu Leu Tyr His 225 230 235 240

Asp Thr Asn

<210> 403

<211> 240

<212> PRT

<213> Bos taurus

<400> 403

Met Leu Leu Gln Gly Ala Leu Leu Leu Leu Leu Ala Leu Pro Ser His 1 5 10 15

Gly Glu Asp Asn Met Glu Asp Pro Pro Leu Pro Lys Gly Ala Cys Ala 20 25 30

Gly Trp Met Ala Gly Ile Pro Gly His Pro Gly His Asn Gly Thr Pro 35 40 45

Gly Arg Asp Gly Arg Asp Gly Thr Pro Gly Glu Lys Gly Glu Lys Gly 50 55 60

Asp Ala Gly Leu Leu Gly Pro Lys Gly Glu Thr Gly Asp Val Gly Met 65 70 75 80

Thr Gly Ala Glu Gly Pro Arg Gly Phe Pro Gly Thr Pro Gly Arg Lys
85 90 95

Gly Glu Pro Gly Glu Ala Ala Tyr Val Tyr Arg Ser Ala Phe Ser Val 100 105 110

Gly Leu Glu Thr Arg Val Thr Val Pro Asn Val Pro Ile Arg Phe Thr 115 120 125

Lys Ile Phe Tyr Asn Gln Gln Asn His Tyr Asp Gly Ser Thr Gly Lys 130 135 140

Phe Tyr Cys Asn Ile Pro Gly Leu Tyr Tyr Phe Ser Tyr His Ile Thr 145 150 155 160

Val Tyr Met Lys Asp Val Lys Val Ser Leu Phe Lys Lys Asp Lys Ala 165 170 175

Val Leu Phe Thr Tyr Asp Gln Tyr Gln Glu Lys Asn Val Asp Gln Ala 180 185 190

Ser Gly Ser Val Leu Leu His Leu Glu Val Gly Asp Gln Val Trp Leu 195 200 205

Gln Val Tyr Glu Gly Glu Asn His Asn Gly Val Tyr Ala Asp Asn Val 210 215 220

Asn Asp Ser Thr Phe Thr Gly Phe Leu Leu Tyr His Asn Ile Val Glu 225 230 235 240

<210> 404

<211> 244

<212> PRT

<213> Homo sapiens

1

<400> 404

Met Leu Leu Gly Ala Val Leu Leu Leu Leu Ala Leu Pro Gly His

LICOSIOS LICOSI

| Asp | Gln | Glu | Thr 20 | Thr | Ile | Gln | Gly | Pro 25 | Gly | Val | Leu | Leu | Pro 30 | Leu | Pro |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Lys | Gly | Ala 35 | Cys | Thr | Gly | Trp | Met 40 | Ala | Gly | Ile | Pro | Gly 45 | His | Pro | Gly |
| His | Asn 50 | Gly | Ala | Pro | Gly | Arg 55 | Asp | Gly | Arg | Asp | Gly 60 | Thr | Pro | Gly | Glu |
| Lys 65 | Gly | Glu | Lys | Gly | Asp 70 | Pro | Gly | Leu | Ile | Gly 75 | Pro | Lys | Gly | Asp | Ile 80 |
| Gly | Glu | Thr | Gly | Val 85 | Pro | Gly | Ala | Glu | Gly 90 | Pro | Arg | Gly | Phe | Pro 95 | Gly |
| Ile | Gln | Gly | Arg 100 | Lys | Gly | Glu | Pro | Gly 105 | Glu | Gly | Ala | Tyr | Val 110 | Tyr | Arg |
| Ser | Ala | Phe 115 | Ser | Val | Gly | Leu | Glu 120 | Thr | Tyr | Tyr | Thr | Ile 125 | Pro | Asn | Met |
| Pro | Glu 130 | Arg | Phe | Thr | Lys | Ile 135 | Phe | Tyr | Asn | Gln | Gln 140 | Asn | His | Tyr | Asp |
| Gly 145 | Ser | Thr | Gly | Lys | Phe 150 | His | Cys | Asn | Ile | Pro 155 | Gly | Leu | Tyr | Tyr | Phe 160 |
| Ala | Tyr | His | Ile | Thr 165 | Val | Tyr | Met | Lys | Asp 170 | Val | Lys | Val | Ser | Leu 175 | Phe |
| Lys | Lys | Asp | Lys 180 | Ala | Met | Leu | Phe | Thr 185 | Tyr | Asp | Gln | Tyr | Gln 190 | Glu | Asn |
| Asn | Tyr | Asp 195 | Gln | Ala | Ser | Gly | Ser 200 | Val | Leu | Leu | His | Leu 205 | Glu | Val | Gly |
| Asp | Gln 210 | Val | Trp | Leu | Gln | Val 215 | Tyr | Gly | Glu | Gly | Glu 220 | Arg | Asn | Gly | Leu |

Tyr Ala Asp Asn Asp Asn Asp Ser Thr Phe Thr Gly Phe Leu Leu Tyr 225 230 230 235 235

His Asp Thr Asn